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THE AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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THE NEW VOLUME.

In presenting to our friends and patrons the first number of volume 6, it is becoming, in the first place, that we should return our sincere acknowledgements for the generous support we have received; and secondly, that we should renew our promise, to render the *American Farmer*, an acceptable visiter to every homestead within the range of its circulation. And as the best guaranty we can offer for a continuance of the zeal heretofore felt, and the industry manifested upon the face of its pages, we tender the desire that is within us; to advance the interests, and elevate the character of the agricultural community; as in so doing, we feel assured that we shall contribute towards the strength, the honor, and the power of the glorious union, which binds our vast and highly favored country together in the brotherhood of States.

It shall be our pride and pleasure, in catering for the tastes of our numerous readers, to so diversify the subject matter of our journal, as to cover all the occupations of agriculturists, whether they be engaged in the pursuits of planting or those of farming.

The *Garden* with its compartments of vegetables, whether destined for home consumption, or for market, shall receive every possible attention. In this respect, we shall make our directions so plain, so comprehensive, and so practical, that the novitiate shall find no difficulty in determining as to the proper time for sowing his seeds and setting out his plants; we shall briefly, though clearly, describe the best modes of culture, the kind of manure best adapted to the respective crops, and as clearly point out the several products which should be planted at different periods of the seasons.

The *parterre*, the *borders*, and the *lawn*, with their flowers, their shrubs and ornamental trees, shall also receive that assiduous care which is due to those lovely emblems of rural refinement, which so gratefully minister to the enjoyment of the well regulated and delicately attuned minds of our lady readers, and which are so well calculated to attach man to his home.

The *orchard*, the *vineyard*, and *fruits* generally, will be vigilantly watched over, in order that the farm in the entirety of its business operations, its sustaining, and its money crops, its pleasure grounds, its necessaries, its luxuries, and its economic arrangements, may be conducted with that degree of skill, whose results ensure the elements of pleasure, comfort, and profit.

The calling of a landed proprietor and tiller of the earth, is a noble and a lofty one—he stands upon a prominence that does not appertain to any other human occupation—he is at once the provider of food and raiment for his kind—to his industry and enterprise, the world, its communities, its classes, and its interests, are indebted for their numerous supplies. Without agriculture—without the products of the field and of the forests—the merchant would have no need for his commercial marine—nations would be relieved of all occasion for their naval establishments, which flout their ensigns over every sea, as it is on the products of the earth that they rely for the building material for their ships, their armaments, and their support—the artizan, the mechanic, and the manufacturer, have all to rely upon the same fruitful source for their supplies, to carry on their varied handicrafts. Divest them of these resources, and the cunning of their hands, their geniuses, and their enterprises, would be arrested in their career of usefulness, the hand of industry would be palsied, invention deprived of its incentive, would be stilled into inaction, and the beautiful elaborations of the arts and sciences, be consigned to traditional lore, or live only in the historic page. In a word, *Agriculture*, is the base on which every other pursuit of man reposes—it is the great arch on which all the superstructures of human associations are erected; and as such, it must be viewed as the munificent parent, under the blessings of Providence, of civilization itself. Without the sustaining power of agriculture, those countless avocations which it has called into being—those numerous institutions of civilized man, which it has warmed into life, would tremble from their foundations and totter to a fall; for of a truth, they all exist through the beneficent, the creative, and the productive influences of agriculture.

Contemplating the importance of husbandry in this elevated light—looking upon its votaries, and their relation to the social compact, in a sense so dignified, it is but reasonable that we should entertain the most profound aspirations for their welfare and happiness—and hence we feel permitted to say, that we shall exert the most unceasing vigilance to further and protect their interests, and will endeavour to promote their prosperity by every means

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which may legitimately come within the province of the conductor of a periodical devoted to agriculture.

Independently of attending to those subjects directly connected with manures, their properties, and relative values; with soils and the means of improving them; with farm buildings and rural economy; with the products of the field and the management of the dairy; with draining, its importance to products, its use as a sanatory measure, and as a means of giving increased value to landed property; we shall in our current volume, endeavor to point out to agriculturists wherein, through their own indifference and neglect, they have suffered other classes to monopolise the honors, and appropriate to themselves the benefits and immunities of governments, while they, the agriculturists, the corners-tones, the foundations of society, and the stays of those governments, have been content to bear nearly the whole burthens in peace as well as in war—in fact, to pay for the music while the recipients of those favors smiled at the extreme good nature which had prompted such uncalled for sacrifices. We shall endeavor to show, that if farmers and planters aspire to have justice done to them by their public servants, they must combine together, and act as a class whose interests being identical, require that those interests shall be asserted, protected and maintained, by union, by concert, and by a fixed resolve, to slumber not until their importance is acknowledged, and the aims and the ends of the justice to which they are entitled, are attained.

We feel that the occasion called for this expression of our prospective intentions, and shall conclude, by repeating our thanks for the warm interest heretofore manifested by our kind friends and patrons, *in the extension of our circulation*, and by assuring them, that laborers in so good a cause, should not grow faint and weary in well doing, as we are sure that every additional name added to the subscription list of the *American Farmer*, will serve to increase that generous spirit of improvement, which so distinguishes the present husbandmen of our land from those of past years, and whose labors have done so much towards restoring much of the soil to its ancient state of fertility, and of adding alike to individual and public wealth.

Gleanings and Thoughts,

BY THE EDITOR OF THE AMERICAN FARMER.

DEEP PLOUGHING—EFFECTS OF LIME, &c.

The following extracts from Sir *John Sinclair's* code of Agriculture, combining, as they do, the opinions of some of the most enlightened agriculturists of England, should, at least, direct the attention of American husbandmen to the consideration of the subject of deep ploughing:

In Curwen's report, the author states, that "deep ploughing permits the surface-water to pass beneath the roots of the crops in winter, and admits the action of the air and the influence of season in summer; hence a powerful evaporation is carried on, which supplies the plants with moisture during the driest weather. After every ploughing, the earth exhales as much as after the most copious shower of rain."

"When soils are *deepened*, lime should be applied to correct any noxious ingredients in them; and putrescent matters to give the soil an adequate degree of fertility. It is a *mistake*, to suppose, that deepening the soil, *renders a much greater quantity of manure necessary*. The most intelligent farmers do not think that more than ten to sixteen per cent. additional is required."

"This maxim the farmers of Flanders acted upon, gradually deepening their soil, as their manure was augmented."

Edward Burroughs, Esquire, says:—"I have made many experiments in order to ascertain the advantages to be derived from deep ploughing, all of which have proved the benefit of the practice. Even in many instances, in which the subsoil brought up, was, to all appearances, very unfertile, the surface soil was much benefitted.

Mr. *Parker*, of Munden, "prefers *nine inches* for the depth of ploughing, and he has practiced that system for many years, on good loamy land in Huntingdonshire, as well as in the clay and flints of Herefordshire. He never lost a crop by it, but has met with unwearied success; and he is clearly of opinion, that the *propriety of deep ploughing, ought not to be made a question*, but received as an admitted truth."

John Middleton, Esquire, states, that "the farming gardeners near London, act upon the same system, with great success. They plough to the depth of from 10 to 12 inches."

Mr. *Marshall* has known a succession of shallow ploughing farmers *beggared* on a stiff clay land farm, and their successors, by *deeper* tillage, make a farmer's *fortune* upon it."

Professor *Johnston*, in his recent lectures before the New York State Agricultural Society, says:—

"Some plants descend to a great depth. This is another important fact, for if the habit of a plant, is thus to go down to a great depth, and if the deeper it grows, the more food it extracts from the soil, then it is quite clear, that the more shallow the soil is kept, the *less* the farmer has studied the soil."

"If science takes hold of the plough handles and points it *deeper into* the earth, in order that the roots of plants may reach a *lower depth*, for roots will grow deeper if you will let them, and *the deeper they go the more robust the plant and the more profit to the farmer*."

Professor *Jas. F W. Johnston*, of the Dublin University, gives the following fact, in illustration of the good effects of deep ploughing:

"The Marquis of *Tweedale*, in his home farm at Yesters, has raised his land in value eight times (from 5s. to 40s. per acre) by draining and *deep ploughing*. After draining, the fields of stiff clay, with streaks of sand in the subsoil, are turned over to a depth of 12 to 14 inches, by two ploughs (two horses each) following one another, the under 6 inches being thrown on the top. In this state it is left to the winter's frost, when it falls to a yellow marly looking soil. It is now ploughed again to a depth of 9 or 10 inches, by which half the original soil is brought again to the surface. By a cross ploughing this is mixed with the new soil, after which the field is prepared in the usual way for turnips. But it is observed, that if the ploughing has been so late that the subsoil has not had a proper exposure to the winter's cold, the land on such spots does not for many years equal that which was earlier ploughed. The reason is, that when once mixed up with the other soil the air has no longer the same easy access to its pores."

Now, from the premises afforded by the foregoing

experiments; from accounts which we have read, and from facts which have come within our own personal knowledge, we draw the following deductions:—

1. That deep ploughing, under a *favorable condition of the soil*, will prove signally conducive to the improvement of its capacity for production, and that a corresponding improvement in the quality of the products, will be the necessary result; and for the following among other reasons. 1. That, by deepening the soil, you enlarge the area from which the plants draw large quantities of their organic and inorganic food, or in other words—you increase their pasture, and, in so doing, augment their food: 2. That as the roots, in search of food, descend very far below the line of ploughed ground, they must, in their descent through the indurated strata of most subsoils, encounter difficulties, which can but exert an unfriendly influence upon the development of their structures, both beneath and above the surface of the soil: 3. If we turn up and pulverize the soil 8 or 10 inches in depth, it strikes us as being consistent with common sense and reason, that it must be preferable to a tilth of 3 or 4 inches, as is too often the case; because, by opening the pores of the earth to the former and greater depth, we admit the air so much deeper, thereby present a more ample field for the action of the meliorating influences of the atmosphere, and produce a condition in the soil, in its physical capacity, much better adapted, than it would be, under the shallower tilth, to avail itself of those advantages resulting from the operating causes alluded to: 4. By this increased depth of tillage, a much enlarged penetrable body of earth is presented for the absorption of water from the rains; and, of course, moisture will be longer maintained in the soil, than if the body subject to exhalation had been less; and in proportion to the extension of the period to which such moisture may be maintained, so will be the resulting benefits to the growing crops, as the continuous existence of a healthful degree of heat, air, and moisture, operates to ensure vigorous and perfect vegetation: 5. Owing to the free admission of air into the earth, afforded by deep tillage, its competency to imbibe dews is enlarged, and it is, therefore, the better enabled to avail itself of whatever fertilizing gases there may be existing in the atmosphere: its powers of attraction and condensation, being increased, in a due ratio to the volume of pulverized soil presented as the absorbent medium: 6. Heavy rains, under deep tillage, are not so injurious as under shallow; the condition of the soil, from its increased volume, being better calculated for their primary reception, and ultimate disposition: 7. The earth being rendered more permeable to atmospheric influences, under a condition of deep tillage, must, as a consequence, be earlier than that which is shallow, as from the fact of the greater magnitude of the body liable to be thus acted upon, its capacity for the retention of heat, is also greater, and the heat, therefore, is more readily and equally diffused: 8. By deepening the body of pulverized earth, the facilities are increased to the plants, of extending their roots, both laterally and downwards, and of more securely imbedding and fixing themselves in the soil; thus protecting themselves against the uprooting effects of freezing and thawing in winter, and the withering, blighting, influence of the sun's rays in summer.

2. That all *wet soils* should be drained, and the water permitted to percolate through the earth, before deep ploughing be attempted upon them, or lime, marl, or ashes be applied.

3. That where the subsoil is a *hard* clay, the increase in the depth of ploughing should be gradually effected; say from 1 to 2 inches, in any one year; and that, for fear of injury resulting, *such soils should be ploughed in the fall or winter, to be acted upon by frost*,—and should always receive a dressing of calcareous matter, say, in the proportion of 50 bushels of lime, 100 bushels of ashes, or 100 bushels of marl to the acre.

By the action of the *frost*, we should expect the newly turned up maiden earth to be broken down in its tenacity, its consistency reduced, and its more adhesive particles disintegrated, and rendered comparatively friable. By the action of the lime, we should expect, that any unfriendly salts, which might be present, would be neutralized, and rendered innoxious, if not converted into elements of healthful fertilization. The latter effect, however, we believe would be produced. Nor would the salutary offices of the calcareous matter stop here; but would be continued for many years, in the performance of those other offices, which exert so happy an influence upon the productive energies of the soil, and whose effects have added millions of money value to landed estates, in every country where it has been used as an agent of improvement. If we were asked,—what those other offices are? our reply would be,—that lime improves the quality of the crops, especially those of the breadstuff kinds; that, when not applied in excess, it accelerates decomposition in all animal and vegetable substances; that it destroys insects and worms, by its contact; discourages the growth of weeds, by promoting that of the grasses; neutralizes the free acids in the soil; that, under a favorable concurrence of mould, moisture, and heat, it induces the formation of nitrates; that it conduces to health; imparts warmth to the soil; increases its power of absorption, serves to render stiff soils friable, and gives consistency to sandy ones; that it promotes, by its electric force, fermentation and ultimate decay in inert matters, causing carbonic acid to be evolved, and nitrogenous gases to be disengaged, thereby converting that which was before unavailable, into active sources of vegetable nutriment. Thus then, it is obvious, that, if *Lime*, is not, of itself, actually food for vegetables—and we believe it is; for it is found to be a constituent element in the structures and fruit of almost every tree, herb, and vegetable, that grows—it operates as an efficient agent, in the procurement and preparation of their food. It grasps with a miser's hold the uncongenial acids of the soil, retains them in possession, until it predisposes and prepares them to become the food of plants; it also lets free certain of the salts, rendering them tributary to the wants of vegetation. Therefore, *Lime*, in this connection, may be viewed as the *caterer*, as well as the *cook*, of the whole vegetable family; but we go farther,—we believe it to be a most important and healthful ingredient in the dishes, which it so notably provides and serves up; for if it were not an essential constituent, its *presence* in vegetable products, would not be so invariable as it is, as nature does not effectuate her works by accidents and blunders; but in accordance with the fixed, unerring, and immutable, laws of Providence.

4. That notwithstanding all the advantages which *deep ploughing*, and *liming*, are calculated to ensure, their full benefits can only be realized, where due attention is paid to the application of animal and vege-

table manures—where a judicious system, a proper rotation of crops, is practiced, and the culture of *clover*, and the *grasses*, forms an element in such system,—*as Lime must be furnished with the raw material to work up into the food of plants*—and that, where the climate may not allow of the cultivation of clover and the grasses, a crop of *peas, buckwheat*, beans, or some other green crop, must be grown, and ploughed in, every third or fourth year.

By the culture of *clover*, besides securing a large body of vegetable matter to be turned in, at the commencement of every rotation, thereby adding an important quantity to the materials for forming, and supplying *mould* to the surface soil, and of increasing its powers of absorption;—for those powers bear a just relation to the amount of such decomposed and decomposing matters as may exist therein,—you will increase the quantities of mineral salts also. The tap-roots of clover plants descend into the earth several feet, where they find deposites of these salts, absorb and assimilate them in their structures, and, as a consequence, bring them up to be mingled with the surface soil, when, in the course of rotation, it may be ploughed up; thus rendering available to subsequent culture, ingredients essential to vegetation, which had before been locked up in the subsoil. And it is, therefore, obvious, that the deeper you may plough, the greater will be the quantities of such substances restored to the surface soil. In this light the culture of clover may be said, not only to furnish vegetable food, but mineral food also, and hence, its great importance, in every system which looks to the permanent improvement, and to the full development of the productive capacities of the earth.

In addition to the foregoing, we would remark, that the sub-soil plough may be used as a valuable auxiliary means, in deepening all soils that may need it. If such soils were subsoiled a year in advance of the operation of increasing their depth, two benefits would result: heat, air, and moisture, would be let in upon the subsoil, and, to a very considerable extent, tend, by their chemical action and reaction, to neutralize its salts; while, at the same time, the percolation of the water through the earth, each succeeding rain, would carry large portions of them off, so that on the succeeding year, when a part of the subsoil shall be added to the surface soil, it will be found, that it contains much less of those injurious oxidized matters, which have hitherto operated to prevent deep ploughing from being as popular as it ought to be. We feel very certain that, if this plan of subsoil ploughing were adopted as a *precedent process*, much less lime, ashes, or marl, would be required as correcting agents, as there would be a greatly reduced quantity of unfriendly salts to be acted upon.

Notwithstanding all that we have said in favor of deep ploughing, of draining, and of subsoiling—notwithstanding all that we have written in favor of the virtues of lime, marl, and ashes, as meliorators of the soil, and as food for plants, directly, and indirectly—notwithstanding our views as to the culture of clover, the grasses, and green crops, and we have said nothing on either head that we do not feel to be justified by our experience and observation,—we desire the Agriculturist to believe, that however valuable each and all of these may be, that he must not, though he adopt all of them, relax, for a single moment, in the accumulation and preservation of every material on his farm, that is, or can, by decomposition, be converted into manure, and when accumulated, to apply it to his fields,—for after all that the authors of fine-drawn, fanciful, theories and hypotheses, may say to the contrary, the *earth* is the great manufactory in which the food of plants must be *mainly* prepared:—the atmosphere, the dew, and the rain, are each charged with the elements of fertilization, they each, in their turn, dispense those elements to the crops of the field, and contribute largely to their growth and fructification; but still the *earth* is the great laboratory, where those manipulations are carried on, which ultimately ensure to the husbandman the reward of his labors. Let him, then, give to the *earth* the raw material suitable for the process, and it will convert it into *mould*, and not only feed the plants which he may commit to its charge, with the viands of the soil, but husband, and appropriate those also, which are to be found in the air, in the dew, and in the rain, to their growth and perfection. If such were not the fact, the barren sand would be as productive as the most fertile mould, a fact which is contradicted by the experience of every cultivator in the world. Providence, in his wisdom and munificence, has ordained that the elements shall contribute their share towards clothing the earth with verdure, but he has left it to man, by the proper exercise of his reason and energies, to so use the means placed at his disposal, as that the soil may be preserved in its virgin power, strength, and fertility,—and that can only be done by periodical and generous manuring—by returning to the earth an equivalent for its bountiful contributions towards the support of the human family.

ELEMENTS OF SCIENTIFIC AGRICULTURE—We have received from the publishers, Messrs. *Erastus H. Pease & Co.* of Albany, New York, a copy of the above work. Its author is *John P. Norton, M. A. professor of Scientific Agriculture in Yale College;* and we look upon it as one of the most valuable contributions to Agricultural literature that the press has sent forth. Its definitions of the properties, constituents, uses, and offices of the various substances which comprise soils and their products; its explanations of the several kinds of manures and their specific actions, of the composition of plants, the feeding of crops and animals; the remarks on the produce of the dairy, on the nature of chemical analysis, and the application of Geology to Agriculture, are all so plain that he who runs may read, and reading, comprehend what he reads. It appears to have been the great object of the enlightened author to accommodate his writing to the general mind. Though he has necessarily had to deal in the *technicals* of science, he has explained each, in its turn, in so easy and familiar a way, that all may understand not only the meaning of the term used, but the office and relation, which the particular substance named bears to the earth. As an elemental book,—for clearness, simplicity, and practicalness, it has no superior. It should not only be introduced into every literary institution in the country, but find a place in the dwelling of every Agriculturist who may desire to understand the close affinity, which the science of chemistry bears to the noble art by which he obtains his living, and how essential its knowledge is to a successful and profitable prosecution of his labors.

We unhesitatingly commend professor Norton's work to our readers, and as unhesitatingly say, that its chapters upon the rearing of animals, the management of milch cows, the management of the dairy, and the fattening of cattle, appear to us to possess more merit—more plain, manly common sense, and more true philosophy, than any others that have ever fallen under our observation.

ESSAYS
ON
Various Subjects of Practical Farming.

BY EDMUND RUFFIN, OF VA.

No. I.—ON DRAINING.

Observations on the General Subject.

The draining of superfluous and hurtful water from arable land, is one of the most general and important requisites of agriculture. Yet no other operation of general utility and importance in farming is so little understood, or so generally neglected. The dryness of our climate, and the general sandy and pervious texture of our soils and sub-soils, (permitting the natural discharge of surplus water by filtration,) leave much less necessity for draining in this region than exists in countries like Britain, having a moister climate, less influence of the sun, and also in general more clayey soils and sub-soils, too close in texture to permit the descent and escape of surface-water by filtration. Still, comparatively exempt as may be our lands from the necessity for drainage in general, much of the small proportion for which it is required, and for which the execution would be highly profitable to the farmer, is still left either without any efficient attempt for relief, or the attempted drainage has been so erroneous in plan, or imperfect in performance, that the labor has been of very little benefit—and in many cases the cause of actual difficulty, and of much increased cost to subsequent and better directed operations. Small as is the proportion of the lands of lower Virginia which require artificial draining, there are but few farms on which there is not more or less of even the cultivated (and supposed dry) land injured by superfluous water; and which injurious water can be removed not only beneficially, but profitably in every sense.

If rain-water remains in standing pools in depressions of the surface of land, or on any soil too close in texture to permit the escape of water by filtration, and with a surface too level for the excess to flow off—or if springs, or streams, flow over the surface of any other ground—all persons would then deem it necessary to remove the water by drainage. And for such ends, it would often be deemed sufficient merely to draw off the excess of water by open ditches leading to some lower place of discharge. Even these ditches are usually rude in construction, imperfectly placed, and therefore costly to maintain, and of bad operation withal.—But no regard is usually paid to the numerous other cases of subterraneous or under-water injuring the surface-soil and its productions, though not actually oozing out at any time on the surface, in visible fluid; and the farmer is content to till such ground to obtain less than half the proper and available amount of products. Indeed, the best artificial drainage in this country, in numerous cases, falls far short of attaining the perfect end sought for, or which is desirable. This must often be the case, not only because of the occasional deficiency of knowledge, and of errors of judgment and of the plans of even judicious drainers—but also because our low-priced lands and their products will not, by the increased profits, always remunerate the costs of the most perfect and effectual drainage. But though it is not always possible, and, if possible, might not be profitable or desirable, to drain all wet lands in the most perfect manner, it is essential to the best profit, on almost every farm, that much more draining shall be executed—and also that the modes adopted shall be both cheaper and more effectual than those most usually employed, or recommended.

In one of the latest European treatises on this subject, republished in this country, (embraced in "The Book of the Farm,") draining is defined as "the art of rendering land not only so free of moisture as that no superfluous water shall remain in it, but that no water shall remain in it so long as to injure or even retard the healthy growth of plants required for the use of man and beast." Now this is a correct definition of *perfect* drainage. But such degree of perfection, if to be attained by art, and by the outlay of labor and money, would be too costly in many situations, and for almost all in Virginia. In the work just quoted from, cases are stated of different profitable drainages having been executed at prices rising above £5 the Scottish acre, (equal to $20 or more for the English and American acre;) and the author supposes that £7 the acre might be well afforded. It requires no argument to show that no such expensive drainage would be justified by the profits on our cheap lands, and in ordinary cases; and that it would be preferable here to adopt cheaper and less perfect modes—or, in some of the most difficult cases, to omit the drainage, and lose the use of the land altogether.*

The want of sufficient draining not only increases the labors, and lessens the products, of more or less land on every farm, but the healthiness of all such localities is necessarily impaired. The excess of water, whether lying on the surface of the land, or reaching it from below by capillary attraction, in either case is stagnant, and hurtful to the plants which are rooted in such ground, and to the residents who breathe the air contaminated by the exhalations from the evaporating excess of water. The draining of a country conduces to its healthfulness more than any other means; and the benefits on this score would usually remunerate the proper costs and judiciously directed labors of drainage, even if there were no other profits.

There is still another important benefit following draining, in the improvement of the temperature and warmth of soils. It is a well known scientific fact that evaporation produces cold. The wetter any ground is, the greater is the evaporation therefrom, and consequently the colder the soil, and the atmosphere immediately overlying the soil. Every farmer knows that on damp spots of his fields, seeds

* In the last No. (for June, 1850,) of the "American Agriculturist" of New York, there is an editorial article on under-draining, in which are the following passages:—"The expense of thorough under-draining in England, a few years since, was from £7 to £10, and even £12 the acre; but owing to recent improvements and facilities in the mode of doing it, and procuring materials, the cost is reduced to about £4 or £5, ($20 to $25,) a point beyond which it would seem scarcely to admit of being lessened," &c. The writer thereupon estimates that in this country, the increased costs "need not add more than 20 to 30 per cent. to the English prices. This may make the cost of draining, from $25 to $35 per acre—possibly, in some instances, $40. If the result should prove that we can double the crop on such fields, there are millions of acres of land in this country that will this moment justify the adoption of a system of thorough draining, &c."—I dissent entirely from this recommendation. The writer is referring to the English plan of thorough-draining of surface-water only, (not springs,) and by the costly English appliances of tiles, pipes, &c. To justify and remunerate such expenses as would thereby be incurred, there should not only be greater necessity for the improvement than the soils and climate of this country often present, and higher prices of land and its products than even those of New York, but the further condition that the costly improvement shall be both effectual and permanent.

cannot be planted, except at great hazard, until late in spring. The injurious effects of cold, or low temperature, are manifest until near mid-summer, or even later, if the excess of subterraneous moisture remains so long. The seeds of crops are there slow in germinating, if they do not actually rot. The plants rise feebly, grow slowly, and are easily and greatly injured, and many destroyed because of their unhealthy growth, by depredating insects. However rich may be such land, and though no excess of surface-water shall be ever visible, and the under-water may be only perceptible in its noxious effects, still not more than half-products will be reaped, for more than a double expense of labor.

The production of cold by the evaporation of excessive moisture is still more obvious in the greater thickness of ice, and more destructive effects of killing frosts, on low lands than on the adjacent high and dry hills, or table lands. Such facts are familiar to every farmer who owns land of both kinds. When the temperature is lowered in cold nights of spring, so as barely to permit the commencement of freezing on the high land, the ice will be from an eighth to a quarter of an inch thick on the close adjacent and apparently dry low ground. Late spring frosts also, and for the same reason, are more injurious to the crops of low than of high lands adjacent. The greater degree of cold thus produced of course is in and immediately over the wettest spots, evaporating the most water. But by the motion and intermingling of the atmosphere, the temperature is somewhat equalized over all the contiguous low land; and thereby the parts most perfectly drained are injured by the cold produced by evaporation from the wettest. And thus the want of draining on one farm may serve to lower the temperature and injure the climate, as well as to effect the healthfulness, of the adjacent farms.

To treat thoroughly the extensive subject of draining in all its branches, the principles and the practice, would fill a volume. It is far from my intention to attempt such a task. Sundry extensive treatises on this subject have already been published by European authors; and defective as they all are, as guides for instruction in practice, and for the different condition of our country especially, they may be read with much advantage by all who desire to study thoroughly the theory or the principles of draining. But whether it is because of the difference of existing circumstances of different lands—or because the scientific authors were deficient in knowledge and experience of practical operations, I have met with no such treatise that would guide a learner to the desired end of successful practice. And thus it happens, that though the theory, or scientific principles of draining, (and especially of under-draining,) may be correctly learned from any one of sundry elaborate treatises, none of their authors have succeeded in applying the theoretical principles to safe practice. From my own long and extensive experience, and especially from my many errors and consequent failures, I have learned that the instructions of these authors for laying covered drains can never lead to successful results, in this region at least, without the appliance of precautions and safe-guards which they have not mentioned as being requisite. If a young farmer were to begin and prosecute the laying of covered drains, with all the aid of the directions furnished by the works of Thaer, Johnston, Stephens, and other European authors of the highest authority, his expenses would be twice as great as would be sufficient for successful results, and yet success would be very rarely attained. Indeed, such instructions faithfully but blindly obeyed, would be more sure to lead to loss and failure, than would the absence of all such instruction to a thinking and judicious learner, who would study by experiment, and establish truths by his early failures, and the investigation of their causes.

My proposed task is much more humble than to write a complete treatise on draining. But yet it may be more useful than works of much greater pretension and higher authority, to the farmers of this country; and especially to those of the tide-water region, to which my draining labors and experience have been confined. For though the principles of draining are uniform and invariable, yet the circumstances causing the want of draining vary greatly with the differences of the geological formation of different localities; and the features of the tide-water region, in regard to geological formation, character and dip of the strata, &c. are very different from those of the parts of Europe which have furnished most of the examples, and subjects for application, to European authors and scientific drainers.

The superfluous and therefore hurtful water, from which land requires to be relieved by draining operations, is the whole excess beyond the quantity of moisture needed for the most healthy growth of the crops. It is either *surface-water*—supplied to the surface of the field immediately from the clouds, in rain, (or snow,)—or remotely from rains and springs, flowing from higher and perhaps remote lands, and which pass over in streams, sometimes swollen and overflowing for short times; or it is subterraneous, or *under-water*, proceeding from springs, and reaching first the lower earth, and subsequently the surface, by capillary attraction of the earth only, if the water be in small quantity, or in oozes—or springs bursting out, if in large quantity. The remedy for the evil of surface-water, (for this country at least,) will always be best provided in *surface* or *open-drains*, including the extremes of ordinary ploughed water-furrows and the largest stream-ditches. Under-water will generally be best removed by *covered drains*. But exceptions to both these general rules will be found in practice, according to variations of the circumstances of the supply of water, the texture of the soil, and the shape of its surface. The whole subject then will be treated in the two divisions, of injury from *surface-water*, and that from *under-water*, and the respective remedies for both.

I.—Drainage of Surface-water.

Rain-water.—When rains are not much more frequent or more abundant than in this region, and the sky is as sunny and the air as drying as here, much the greater proportion of land will require no drainage. Even if the soil is stiff, and but slightly pervious to water, and permitting but little if any of the excess of water to pass through by filtration, yet if the surface is hilly or even moderately undulating, the excess of water will soon flow off to the streams, along the channels offered by the natural and deepest depressions. In hilly lands, the depressions generally decline slightly throughout their whole courses, until reaching some still lower place of discharge in a permanent stream. In such ordinary situations, the temporary rain-streams, whether in gentle rills, or torrents, while pouring down the inclined depressions, will not often need a ditch for their more speedy passage. If the washing and gut-

tering of the soil is prevented by proper care, the excess of water will do but little other damage to the land, or its growth. Such rain-streams seldom continue to flow for more than a few hours at most.

So much as to hilly or undulating land. If a field is so level that but little water can flow off, still, if the soil, and the lower earth to the depth of some feet, are of open texture, (as sandy loam, sand or gravel,) and easily pervious to water, the excess of rain-water rapidly sinks, and passes off by filtration. This is *natural drainage*—and the most perfect of all. No care or labor of the farmer can improve this operation of Nature; nor equal it, on any other land requiring artificial drainage.

Lands having both a rolling or hilly surface and a porous soil and inferior bed of earth, are thus doubly secured from damage by any excess of rain-water, falling directly from the clouds. Indeed lands of such porous soil and sub-soil, and with sufficient elevation above the "*water-table*" below, (or the height of the subterraneous water, from whatever source supplied,) are in but little danger from excess by water, from any source; as such excess of water must disappear by filtration before it can ooze over much, if any, of the surface. But level lands of sandy soil and sub-soil, are peculiarly exposed to damage from under-water, when the height of the "water-table" approaches within two or even three feet of the surface of the land. And this is frequently the case in low grounds, where no water is ever seen at the surface, (and perhaps cannot be shown by a ditch of moderate or ordinary depth,) and the farmer either does not suspect that the land is suffering from concealed water, or, if suspecting it, does not deem the evil of enough magnitude to be worth the cost of removing; and also very generally does not know how to apply a remedy, if deeming it necessary. When confined and stagnant water can always be reached in quantity by digging 2 or 3 feet deep, the earth above must be always absorbing water, and drawing it up, by capillary attraction to the surface. Every one knows that if a common flower-pot of large size, with a hole in its bottom, and standing in its shallow dish, is filled with dry earth, and water is poured into the dish as frequently as absorbed, that the earth will become wet to its surface. This cause of injury by water to land is of very common occurrence; and the operation is more injurious to sandy than to nearly impervious clay soils or sub-soils. The remedial treatment for this evil is found in covered draining, and belongs to another division of this essay.

The only kinds of land requiring draining of surface-water furnished directly by rain, are such as are so nearly level as not to permit the excess to flow off speedily, and also being of soil or sub-soil too impervious to permit the sufficiently free passage of water by filtration.

In such cases, in a cool, cloudy and often dripping climate, like that of Ireland, Scotland, and part of England, surface-draining by open ditches and furrows, with all the aid of the slow evaporation, will not suffice to dry land soon enough. Hence the necessity there existing for the "thorough draining" or "frequent drain" system. A field of close clay soil and sub-soil, even if of undulating or sloping surface, and not subject to any access of spring or under-water, may yet require parallel covered drains to be sunk beneath every bed (say of 12, 15, or at most 18 feet width,) intervening with the open water-furrows between the beds. Into these covered drains, the excess of surface-water sinks by the means for filtration thus artificially afforded; and the surface is drained (though less perfectly,) in the same manner as occurs in a naturally permeable soil and sub-soil. It should be borne in mind that this is the object and operation of nearly all the "hollow," or "covered," or "thorough" or "frequent" under-draining referred to by European writers on this subject. In our more sunny and drying climate, there are but few situations in which this expensive mode of operating would be required for sufficient drainage of the land; and almost none, in lower Virginia, where the greater expenses would be compensated by the superior returns of this process. On the much higher priced lands of the northern states, the case may be and probably is different.

Surface-draining by Water-furrows, Grips, and Rain-ditches.—Land suffers from surface-water, and needs proper drainage for relief, when it combines a surface too level to permit the speedy flowing off of the excess of rain falling thereon, with a soil too impervious, or if pervious, too shallow, to permit the excess of water to sink, and so escape below by filtration. The extent of remedial measures required will vary according to the extent of the evils to be removed. If the soil, though of very close texture, be slightly pervious to percolating water, (and very few of the stiffest clays are not so,) or if there be a very slight inclination of the surface in one direction, then the mere ploughing the land into ridges, with the intervening deep and clean water-furrows, which ordinary good ploughing will afford, will suffice for good drainage. In such cases, it will be only requisite that the water-furrows shall have something of the descent which the slope of the field affords; and that on the lower side of the field, a *rain-ditch* shall be cut, to receive and discharge the water which every water-furrow will bring down after too abundant rains. If, instead of the rare case of the nearly level land having but one general inclination of its surface, there are slopes in several different directions, then a different procedure is required. If, as usual in such cases, there is a long depression stretching across the field, to which the adjacent ground slopes, and if the depression be not too crooked for the direction of good ploughing, it will be best to make a deep water-furrow with the plough (or *grip-furrow*) along the bottom of the depression. Then the ridges and intervening water-furrows should be ploughed parallel to the first deep and more or less crooked or meandering water-furrows. If all the water-furrows shall not have a slope from one end to the other, (which would be a rare case,) and the impervious texture of the soil shall then require it, *cross-grips*, or small ditches about 12 inches wide and a little deeper than the water-furrows, must be cut across the beds at every small depression which would otherwise retain puddles of rain water. These cross-grips will receive the surplus water from every water-furrow crossed by them, and convey it into the deeper and lower-lying grip-furrow, which will discharge the water at its lower end. A grip when in a water-furrow, is made by merely ploughing the water-furrow deeper than others, with a few extra runnings of the plough, and throwing out the loose earth with the shovel. A grip across the beds, is also cut by running the plough 3 or 4 times in the same track, and then deepening and cleaning it out with the spade and shovel. These are the smallest and simplest open drains, next to the water-furrows made by the plough in throwing land into ordinary ridges or beds. The grip-furrows are ploughed along,

and the cross-grips are partly filled up by the crossing of the ploughs or harrows, at every tillage of the land. But they are very easily cleaned out again, by broad hoes or shovels. The open drains furnished by ordinary water-furrows cost nothing; as the best and cheapest mode of ploughing and tilling level land is in the form of ridges or beds, and water-furrows. The grips cost not much labor; and from their small size they cause no obstruction to the crossing of teams drawing ploughs or carts.

There are several different advantages in running the ploughing and the beds parallel with the long depressions. The beds are usually of more uniform soil, and of more uniform level throughout their lengths, than they could be if made straight, and crossing these depressions. Thus, the ploughing may be kept, as most desirable in any particular condition of the land as to moisture, by either running on the highest or the lowest ground, the lightest or the stiffest, the driest or the most moist—instead of passing through ground in all these different conditions, in every furrow running straight across the field.

But in cases where straight beds would not be attended with these disadvantages—or if preferred for any cause—grips would have to be run along the bottom of every depression, crossing the beds, and all which grips must discharge at their lower ends into a ditch sunk in the lowest ground, either under or just along the outside of the field. The same ditch would be required whatever might be the plan of the beds. And if receiving no other and more constant supply of water, this rain-ditch, as well as the grips, would convey no water except the surplus from rains, and would at most times be not only empty, but dry.

Should the quantity of water in excess be very abundant on any body of such land—whether from the wide extent of surface receiving and collecting the water of rains, or because the supply of water is increassd by additions flowing from neighboring higher grounds—then it will be required that the rain-ditches shall be wider and deeper, and perhaps may generally or always contain some water. Such variations, depending upon difference of circumstances, will have to be provided for according to the obvious requirements of the circumstances of each case. But though all such rain-ditches should be as deep and as wide as necessary to discharge quickly enough the usual supply of surplus water, it is important that they shall not be larger, and especially not deeper, than required for their proper operation and object. Any depth greater than that from which the water can be discharged, adds nothing to the draining effect; and the bottom of the ditch, so made unnecessarily deep, is kept, through the dryest weather, a permanent pool of stagnant water, or an impassable quagmire.

Permanent Streams, and Stream-Ditches—Another subject for surface-draining, and by open ditches, is the sinking to a sufficient depth below the level of the soil, and conveying away to some lower place of discharge, small but constant streams, coming from without the boundary of the field, if not of the farm. These *stream-ditches* should be made generally along the lower depressions, and also by the shortest proper route, leading to the lowest available place of discharge—whether in a larger and principal stream-ditch, or a river. Stream-ditches serve not only the purpose stated above, of lowering the level of the water, and conveying away permanent streams, but they also serve as places of discharge for all the neighboring rain-ditches, of the covered drains carrying off under-water from springs, and also the surplus rain-water from every adjacent surface and source; which supplies sometimes greatly exceed in volume the capacity of the ditches, and for short times overflow the low land alongside. The size of every stream-ditch should be sufficiently large to prevent these occasional and unavoidable overflowings remaining long upon the land. Their transient occurrence cannot be altogether prevented; unless by incurring more cost than the value of the increase of benefit thereby to be obtained. And no matter how small the volume of constant water conveyed by a stream-ditch, its ordinary height should be not less than 24 inches, (and still better if 36 or more,) below the level of the bordering low ground. Unless the elevation of the ground and the fall of the stream permit stream-ditches to be sunk and kept deep enough to so lower the level of the water, the absorption of the land, by capillary attraction, will bring too much moisture to the surface, and injure the condition of the soil and the amount of products.

The stream-ditches which on almost all farms serve (well or ill) for some or all the purposes here mentioned, together with the *main ditch*, (the receptacle and discharger of all the surplus water from every source—) are the great arteries of every extensive system of drainage—the far most important part—on the good condition and operation of which the success of all the other aids to drainage will depend. Yet because of the universal necessity for and use of stream-ditches, less is required to be said of them than of other less important but less known aids to draining. My remarks upon stream-ditches will mostly have reference to the usual and most important errors of their location, construction, or after-use and preservation.

The lands requiring surface-draining on account of streams, and by means of open ditches, may be conveniently divided into the three following general classes:

1. The bottoms of valleys (usually narrow) lying between high and hilly bordering lands—the bottom-land and the streams having abundant "fall" in their courses.

2. Swamps, or very level and low-lying bottoms, having little fall; and saturated and often covered by the water of sluggish and obstructed streams.

3. The broad flat lands bordering on, and elevated much above rivers of considerable or large size, and of which small portions only are affected materially by the neighborhood of either the river or the high table or hilly lands.

Marshes, subject to be covered by tide-waters, or other lands requiring to be secured from the ordinary height of water by embankments, would offer another and very large class of wet lands, of which the discussion will be here omitted. The three other classes of lands above named, so far as their drainage from surface-water is concerned, will be next considered separately and in order. So much of their drainage as is required by the access of springs, or under-water, (and mostly by means of covered drains,) will be postponed to a later part of this essay, when under-water and covered-draining shall come under consideration.

[*To be continued.*]

Artichokes.—In the first week of this month, cut off the suckers of your artichokes, and thus ensure the growth of the main heads.

Guano, Bone Dust, Lime and Marl.

By Edward Stabler, of Maryland.

Harewood, 5th Month 20, 1850.

Esteemed Friend—James Fife:

Thy favour of the 15th inst. is received, requesting information with regard to Guano—its price, best mode of application, comparative value with other manures, &c.

The surmise is correct, "that such queries are often addressed to you, and that much of your time is taken up in answering such communications:" and although I am "willing to do good" in any way in my power, yet to reply fully to all the letters I receive—and often from entire strangers, even by name—on this and kindred subjects, would require too large a share of my time; if my correspondents would more generally subscribe to the American Farmer, the information desired by many of them would be found embodied there, and save me much writing. In the present case, if not from the querist himself, I stand indebted to his personal friends, for many acts of kindness, and no apology is required. I am pleased to hear of the welfare of my relatives Dr. H., the P's, and others in Albermarle and Goochland. Some of the earlier and most pleasant hours of my life were spent there, in the enjoyment of every thing that the kindest feelings and most liberal hospitality could prompt, to conduce to the comfort of an invalid.

I cannot just now lay my hands on the published statement—or the substance rather, of the communication of my friend A. B. Davis, to the Montgomery County Agricultural Society; but will endeavour to obtain, and forward it.

There is a charge made by the Peruvian Government for every ton of Guano shipped to this country; and if I recollect aright the purport of his remarks, they were, that this charge, together with others incidental to the loading, storing away in bulk, (for it is bagged in this country) and freight, amounted to about 25 to $30 per ton: but little more than half of the price now contracted for in advance of arrivals, with the American Agent, and for 100 tons together; price $46 per ton; the freight has since advanced considerably.

A committee was appointed by the County Society, and subsequently, another by the State Agricultural Society, to memorialize the Executive and Congress to take the matter in hand, and ascertain whether the price may not be reduced by some treaty stipulations; and a letter of this import has already been addressed to the Secretary of State.

I am not aware of any machine being used to sow Guano with. We sift through a sieve of 3-8 mesh—then break the hard lumps on the barn floor with a block having a handle inserted in it. If dusty, we moisten with a watering pot, just sufficient to lay the dust in sowing. The lands are laid off double width—(18 feet wide, if intended to be harrowed in with the wheat)—and sown up and down, or on each side of the land, and throwing across at each cast. With the hand full, and a moderate step, this will apply about 200 pounds to the acre, and with sufficient regularity.

Harrowing in the Guano with the wheat will generally produce a better crop; but its fertilizing properties are more evanescent. I prefer ploughing it in for all field crops; and when attainable would always use it in conjunction with ground bones, for the benefit of succeeding grass crops.—This is pre-supposing that you determine to improve more land than the resources of the farm will accomplish, and are willing to do it by the aid of foreign manures; and being "far removed from lime." If the object is to realize the most in a single crop, and to obtain the quickest return for the outlay, use the Guano alone, and harrow it in with the wheat; but the land, according to my experience, will derive but little benefit from the application, unless the amount is large. By ploughing it in, particularly if mixed with 1-3 its bulk of plaster, the effect is decidedly more durable; nor is it then necessary that the seeding should so immediately follow its application. If, however, the object is to improve the land at the same time—and surely it should be a primary object with every tiller of the soil—and lime, from your location, or the price, is unattainable, I would advise about half the amount determined on, to be expended for ground bones—this may be harrowed in with the wheat. I learn from a friend who recently visited me from Caroline County, Va., that some enterprising individual in Richmond is about to put up a bone mill; by the rail roads or canal, it can be had and used to profit in your section, if some energy is exerted. We haul it 10 to 20 miles, in addition to the freight by rail road.

It is surprising what an effect a few bushels of ground bones to the acre will produce; reference is made to a single experiment, and not an isolated one either. Some 6 years since, we applied 10 to 12 bushels of coarsely ground bones to the acre, on about half of a 12 acre field; on two lands adjoining, was Guano, at the rate of 200 pounds to the acre,—(the cost of each about the same,)—and extending nearly through the field; both applied in the Spring on the oat crop—and which was decidedly better, by the eye, on the two lands with Guano. In the fall, the field was sown with wheat; manuring heavily from the barn-yard, adjoining the Guano, but none spread on the two lands, or on the boned portion of the field.

There was but little difference perceived in the wheat, except from the manure, which was the best—the field having been limed for the preceding corn crop, 80 bushels to the acre. The experiment was made to test the comparative durability of the three kinds of manure, the Guano, ground bones and manure from the barn-yard; and the ultimate profit to be derived from each, in a full rotation. After the first crop of grass, and perhaps the second, which was in favor of the manured portion, the succeeding crops of hay and clover seed, have been decidedly better on the boned part of the field. At the present time—and also the past season, this being the fourth year in grass—the Guanoed lands present about the same appearance, that does a small adjoining space, purposely left without manure of any kind, lime excepted. The manured part affords good pasture, but is quite inferior to the boned, which would yield a fair crop of hay; and probably three times as much grass as the two lands with Guano. It is believed that the increased crop of clover-seed on the boned, over the Guanoed portion, paid for the former; and that the two crops of clover-seed taken from the field, have paid, or nearly so, for the lime and other manures applied.

We do not plough our land in beds, but cultivate it so as to retain the surface level: depending on water furrows, or surface drains, to take off the surplus water; thus having as few cleaning out fur-

rows as possible—a better, as well as neater mode of cultivation. After the first furrow round a given space, sow a land 9 feet wide with Guano, and place a stake equi-distant from the sides, at each turn or corner; when reached by the plough, remove them three steps further in, and sow again; plough in the Guano immediately after sowing. I would prefer sowing the wheat soon after the Guano, and whilst the land is freshly turned up; but if it is well covered by the plough, a few days delay is not so material; but would not like "to delay a month or two before sowing the wheat."

As the use of Guano is but just commenced with you, I would remark, that the Peruvian is a most active fertilizer—perhaps second to none of which we have any knowledge; (the Patagonian I would not again purchase at half its market value, if of similar quality to such as we have used,) but when it fails to repay its outlay from improper application, or untoward seasons—as fail it does at times to be profitable, I well know—the loss is felt at $45 to $50 a ton. At a reduced price, so as to justify an increased quantity per acre, it would pay not only as a fertilizer, but in improving the soil. And although I have seen the first crop of grain on poor land increased 25 to 50 per cent—and perhaps doubled in particular cases by 200 to 300 pounds of Guano to the acre, I have yet to see much improvement in the land itself, justly attributable to this source, from a single application; such at least has been my case; with others it may have been different, owing to location, change of soil, or other unexplained cause.

I am an advocate for the liberal use of all kinds of manure—Guano included, if the price will justify it. A farmer had better buy manure than buy grain, if compelled to do either; for we cannot expect much from nothing, or reasonably calculate upon improving very poor land without manure of some description, unless plaster will act with effect; nor is this generally the case without the land possesses naturally, some particular sources of fertility, not wholly exhausted by bad or improvident tillage.

It is probable those will be disappointed, who expect to do every thing with Guano—make fine crops and improve the land, whilst they take every thing off, and dispense almost, if not entirely, with the more permanent manures, and equally within their reach. True, we may *exist* for a time, only half fed and half clothed; but it is just as reasonable to expect to *improve* under such a regimen, as to calculate upon continued, not to say increased fertility of the soil, without an ample supply, and of the right kind of manure.

With all its acknowledged advantages, it may be questioned whether there is not one drawback to the introduction of Guano. It is used with less profit in direct connexion with lime, than with most kinds of manure; and its facility of application, and quick return, has induced many to give up the lime entirely, if not also to some extent, to neglect the resources of the farm. Others again, in improving poor land, advise the Guano first, and the lime afterwards. This may do very well; but is often better in theory than in practice, for the lime is omitted altogether, and perhaps at some risk of loss, in both time and money, as regards permanent improvement. To use a figure of speech,—the prudent architect will first secure a solid foundation to build upon, and with materials of known durability; this accomplished, he need have no fears of the stability of the structure, and may, at pleause, add thereto, either for ornament or utility.

I am, as may be inferred, a strong advocate for the use of lime—particularly on what are termed "white oak lands," with a stiff clay sub-soil, for on such it usually produces the best effect—nor can the unprejudiced mind well be otherwise, that has witnessed such extended and permanent improvements in various sections of the country, mainly, if not solely attributable to this cause. After liming liberally, I have at times observed quite as great an effect on the clover from half a bushel of plaster to the acre (and without any effect from previous applications,) as was produced by ten times its cost in Guano: so that if "liming is a heavy business" at first, it greatly lessens the expense, and lightens the burden afterwards.

It is often stated that the supply of bones is limited; admit it; but is it not owing, to a considerable extent at least, to waste and improvidence? Take Charlottesville for example, and advertise that thirty to forty cents per hundred pounds (the price now paid in Washington) would be given for all the bones delivered; you would be astonished at the supply; not "the dry bones" alone would come together, but the green or fresh ones would be saved, and in a more profitable state for agricultural purposes. I have no doubt it would justify the erection of a Bone Mill to beat them,—preferable because cheaper than grinding—the cost of which attached to a small mill, need not exceed $20 to $30. In the cities and large towns in your state—to say nothing of the villages and large plantations—it is confidently believed that hundreds of tons annually of this most valuable manure might be availed of, by a little management on the part of farmers; it would "do the State some service" too—more perhaps than the importation of an equal amount of Guano from Peru. *

* From 30 to 33 bushels of ground Bones, according to fineness, weigh a ton; and the usual price with us is about fifty cents a bushel. This at near the same cost will supply three tons of bone to one of Guano; or 10 bushels of the former and 200 lbs. of the latter (the usual application) to the acre. If only one of the two kinds of manure is to be used, the preference would be given to the 10 bushels of bone—and as previously remarked, the fresher and finer ground the better. When fresh it contains much putrescent animal matter, valuable as a fertilizer for a single crop; and by the time this is exhausted, the coarser particles become sufficiently incorporated with the soil, to form a reliable source of nutriment for the succeeding crops, whether of grain or grass. That thin land may be brought to a very productive state, by the liberal and repeated applications of Guano, there is no doubt; but at what cost and how durable the improvements might be, I am not prepared to say. In two instances, from 7 to 800 lbs. were applied at one time to an acre; but in neither did the results correspond with the expense, or induce a repetition of the experiment. My own experience so far, is in favor of more limited applications, say one to two hundred lbs. to the acre, (taking in consideration the price of both grain and Guano,) and also used in connection with other manures, which is found to be the most profitable, and probably more durable in its effect; in two experiments, with from 50 to 150 lbs. of Guano to the acre applied three years since with barn-yard manure for wheat, the effect on the grass-crop at this time, is quite marked: applied in this way, it hastens maturity—thus, in a degree, guard-

Our Rail-road companies have materially reduced the freight on manures—an act of wisdom and good policy, and doubtless owing in some degree to the influence and perseverance of the worthy President of our county Society; one of the first, if not the first to move efficiently in the reform.

Will not yours act with equal liberality to the agricultural interest? I say liberality; but, *to consult their own interests*, would be a better term. For every ton of lime, marl, bones or guano, they transport, it is reasonable to infer an augmented freight list, from the increased product of the soil. I have been surprised—at the lack of good management should I not say? witnessed in some sections: with almost inexhaustable deposites of marl containing from 35 to 70 per cent. of carb. of lime, some in their vicinity purchase Guano at $50 a ton, when the marl could be had for as many cents for the cartage; or in fact no actual outlay in money; and its judicious application would ultimately add much more to their profits. Others can appreciate these advantages, and would avail themselves of them, if only aided by the neighboring rail-roads.

It is strange, but not more so than true, that much of the land near these marl deposites is in a most impoverished state. We can only account for the fact by supposing, that the improvidence of a *former* generation who could thus wear out the virgin soil, would scarcely take the trouble to haul out and spread the marl, because it would not at once "pay cent per cent" for the little time required. It could not be from ignorance of its fertilizing properties; for on the edges of marl banks recently visited, we saw the most astonishing and luxuriant growth of briars and weeds ever met with: whilst *corn stalks* left standing on some adjacent fields, scarcely reached one third the height. If the marl will thus aid the growth of these pests to good farming, it will just as certainly with proper management, benefit its owners. So far as my observations have extended, the lands generally, in the vicinity of these marl beds, is of a character to be greatly benefitted by its use; and a few individuals as they supposed, have given the marl a fair trial, by "a *shovel full* of marl to the corn hill;" the results have generally been "that the marl did no good, if it did not do more harm than good." Such would be the effect with calcareous, if not from all other kinds of manure used in excess. Like lime, its effects are comparatively slow, unless aided by vegetable or other putrescent manures; with them, we may reasonably, if not certainly expect good effects from plaster to follow, on the clover.† As yet you may not

ing against rust—renders the grain more perfect, and is believed to be one of the most profitable modes of using Guano.

† If advising how to make a "fair trial" of marl, it would be to spread from one to three hundred bushels (according to circumstances but varying the proportions) to the acre, and on the surface; best a year or two in advance of the intended crop, for the frost and rains to pulverize and dissolve it. With this grain crop, use if possible putrescent manure, even if only in limited quantities; and follow with clover seed, a peck to the acre, and plaster one bushel to the acre: less seed *may* do, but an ample supply of grass seed is good economy and can alone insure a full crop of grass. Give the land the full benefit of the clover for two seasons at least—neither pasturing nor cutting it, and it will bear an additional dressing of marl before turning under the have access to lime and marl; but if you should, by the increasing facilities of rail road transportation, I would refer to an essay on calcareous manures by E. Ruffin; probably the best and most practical work on the subject, extant. A copy was kindly presented to me by the author, and read with great interest.

As the queries are mainly in reference to Guano as compared with other manures, I will in conclusion refer to another feature in its use, tending to show as I think, its inferiority compared with bone dust, to improve the soil. After some years experience in the use of both, I find it uniformly the case that the same amount expended on each, gives very different results on clover and timothy, and which we usually unite; the timothy sown with the wheat, (directly after harrowing or drilling it in, and before the ground is settled by rain,) and the clover the following spring.

Where the bone is omitted, the timothy preponderates; but the reverse is the fact with the addition of ground bones; and very generally a much more luxuriant growth of both. Hence the preference for the bone when it is to be obtained. If beat or ground fine and in a fresh state, it is little inferior to Guano for our grain crops, and greatly its superior in durability, and in producing fine crops of clover. When these are attained whether from the resources of the farm or the use of lime, bones or guano, a provident farmer will generally be able to continue the improvement.

My letter has extended to fully twice its intended length; but should the above views, hurriedly thrown together, prove of service to any of my friends in your section, it will amply repay me—indeed be no more than liquidating debts of long standing, tho' never forgotten. When opportunity occurs, please do me the favor to present my kind remembrance to our mutual friends.

With much respect, I am, &c.

EDWARD STABLER.

clover. If 10 acres is too much, try five; or even *one* could surely be spared and experimented on, where so much is now nearly laying waste. Lands naturally fertile, tho' exhausted by bad management, are often reclaimed by deeper tillage and the use of clover and plaster alone; and it is supposed by some that all may be thus reclaimed. It is a sad mistake, as many have found to their cost after purchasing poor land. They condemn the system, when it is not at all adapted to their cases, for their lands must have something, now lacking, (as analysis would clearly show) if not always deficient in; and experience, the best of all teachers, has shown that lime, marl, bones, &c. will supply it.

THE POTATO SWEEPSTAKES.—We have received the subscriptions for several competitors for the Claggett Potato Sweepstakes, and we expect a number of others before the first of August, up to which time the list will be open—*We* have *peculiar* reasons for desiring that the competitors shall be numerous—we will be liberal, however, in sharing the *spoils* with our friends. Dr. J. H. Bayne, writes us that although he entertains strong hopes of succeeding in the contest, he would still be willing to exchange his chance for the premium for our privilege of eating. The Dr. very justly concludes, that, from the list of premiums and the inducements held out, a grand State Exhibition may be anticipated—We can promise that those who are present wil have no cause to repent it.

WORK FOR THE MONTH.

As *July* is the harvest month of most of the wheat growing states, we shall not delay our Agricultural friends in preliminary remarks, but come at once to those labors which claim precedence

ON THE FARM.

Harvesting.—In several of the States south of Maryland, the wheat harvest is over, but as from the wide spread of our journal, there are many other States in which harvesting has not been begun, we deem it our duty to admonish our friends who may be thus situated, of the advantages always resulting from timely preparations being made, in order that every moment allotted to the cutting, curing, and securing of the grain, may be properly improved. Among the means necessary to success, may be mentioned, the timely preparation of harvest implements, harvest hands, and harvest supplies. No farmer can permit these arrangements to be delayed until harvest is upon him, without suffering severely in his interests—he may have been favored by Providence with a bountiful crop, but if he be either deficient in tools, implements, or the requisite force to secure his crop, the weather may come to despoil him of a very large portion of the fruits of his labor. We have known an instance, where fully one-fourth of a crop of wheat was lost to the owner, because, from mistaken views of economy, he had failed to provide himself with a force adequate to place his grain, when cut down, beyond the casualty of rain. We say then to all, let your harvest force be full and ample—your supplies, generous in allowance, and good in quality, and your implements of the right sort, and enough of them; for no farmer ever yet gained anything by pursuing a parsimonious policy, in the procurement of those appliances which secure the necessary facilities of his business.

Time of Cutting.—Our advice to all is, *cut your grain before it becomes dead ripe;* by so doing, you will save nearly as much as will cover your expenses afield.

Upon this subject, professor *Norton*, in his excellent work recently published, entitled "*Elements of Scientific Agriculture,*" holds the following views:

"The time of cutting grain very sensibly affects the proportion of fine flour and bran yielded by samples of it. Careful experiments have shown, with regard to WHEAT, that when cut from 10 to 14 days before it is fully ripe, *the grain not only weighs heavier, but measures more: it is positively better in quality, producing a larger proportion of fine flour to the bushel.* When the grain is in the milk, there is but little woody fibre; nearly every thing is starch, gluten, sugar, &c. with a large per-centage of water. If cut 10 or 12 days before full ripeness, the proportion of woody fibre is still small; but as the grain ripens, the thickness of skin rapidly increases, woody fibre being formed at the expense of the starch and sugar, these must obviously diminish in a corresponding degree, the quality of the grain being of course injured. The same thing is true as to all of the other grains."

With regard to the proper time for cutting, we think it would be a safe rule, *to cut when an inch or two of the straw just beneath the head turns yellow and becomes dry,*—as, from that period, the grain derives no more nutriment from the roots of the plants, the medium of circulation being arrested by the aridity of the straw at its point of conjunction with the head.

Cultivation of Corn.—Let your *Cultivators* be busy in your corn-fields from now until you lay by your crop. Be able to say when this is done,—that the weeds and grass have no resting places in your Corn fields, and that you have so kept the earth stirred, that it was at all times in a condition to partake of the fertilizing repasts afforded by the descending dews. Let not the occurrence of a drought stop your Cultivators; for, upon such occasions, more than any other, it is necessary that the soil should be kept open, and in a condition to avail of the refreshing influences of the atmosphere. *Cultivate* your Corn as much as you list in dry weather, and you will benefit the crop, but do *not plough* it, unless you desire to tear and cut up the roots, and deprive the plant of the power of taking up those supplies of nutritive gases, which are necessary to the formation of the grain.

Hay harvest.—The best time to cut grass for hay, is while the plant is in blossom, for although it may not be quite as strong in nutriment, as if left till the seed is ripe, the land is less exhausted, and the hay, itself, not being so coarse, is easier digested, and more acceptable to all kinds of stock.

Millet—may be sown up to the 10th of this month. The best soil for this crop, is a deep, rich loam, which should be liberally manured, thoroughly ploughed, and made perfectly fine by repeated harrowings. As to the quantities of seed to be sown for grain, and for hay, we refer to our remarks of last month.

Fall Potatoes.—Keep your patches of potatoes clean from weeds and grass; and if you have not already done so, give them a top-dressing of, say a bushel each of *lime, ashes, plaster,* and *salt, not* with the view of finding a specific in such compost for the *rot,* but for the more rational purpose, of supplying the potatoes with elements essential to their growth, and which are always found by every well conducted analysis in their tubers and tops; and hence we infer, that it is the part of prudence to supply them, lest they might be absent from the soil, and the roots suffer for the want of them; for we take it to be a fair inference, that if these substances were not essential to their growth, their *presence* would not be so invariably as it is.

SHEEP.—It should be the object of every owner of a flock of Sheep, from now until fall, to keep them supplied with *tar* and *salt,* to enable them to arm themselves against the *fly* which deposits its eggs in the nostrils of the Sheep, and thus prevent the disease called *worms in the head,* which is the result of such deposites. The tar and salt should be kept in a trough under cover, in the pasture, accessible to the sheep at all times, and renewed every few days—the salt should be sprinkled over the tar, so as to tempt the sheep to partake of it, in doing which they will tar their noses, and thus be secured against the attacks of the flies.

FALL TURNIPS.—Every one who desires to raise a good crop of turnips, should make his arrangements, so as to be able to sow them about the 25th of *this month.* By sowing thus early, should the plants be cut off by fleas or flies, there will be time left to resow. The general practice has been, to sow on the 10th of August—a period too late, in the event of the plants being cut off, to allow of resowing, a contingency which every culturist should not only look to, but provide against.

Preparation of the ground.—If your ground is not in sward, give it two ploughings, take care each time to harrow until the soil is in fine tilth. Plough

in one-half of your manure to the full depth of the furrow, which should be a deep one, and harrow the other half in, just before you sow your seed.

Kinds and quantities of Manure.—Among the manures afforded by the farm, perhaps cow dung is the best, and as turnips are of quick growth, *that* the better of being half rotted down. Sheep dung is also good, and as that is easily decomposed, it does not matter how fresh it may be when applied. Indeed, any strong *nutritive manures* will answer; the great object being to give to the roots of the plants a plenty to feed upon. 20 double horse cart-loads of such manure, as described above, is sufficient for an acre, but will be all the better of having 10 bushels of *ashes* either mixed with it, or broadcasted at the time of sowing the turnips: 10 bushels of *bone-dust*, 10 bushels of *ashes*, 2 bushels of *salt*, and 1 bushel of *Plaster*, broadcasted, at the time of sowing, will manure an acre of ground sufficient to ensure a good crop of turnips; such mixture should be mixed up a few days before being used, to excite decomposition in the bones: 400 lbs of *Guano*, and 1 bushel of plaster, to be well mixed together, and ploughed in about 4 inches deep, (the ground being previously ploughed 8 inches in depth,) will efficiently manure an acre of turnips.

Preparation of Seed.—Soak the seed 24 hours in fish oil, then drain off the oil, and mix the seed with ashes until they are separated, and then sow them. *Soot*, *plaster* and *lime*, are also good to mix in with turnip seed after being soaked in oil. Seed thus soaked, germinate quicker than when not soaked—the smell of the oil is repellant to insects, while its carbon serves to aid the plant in its incipient growth.

Quantity of seed per acre.—If mixed with twice its bulk of sand, and sown by a skilful hand 1 lb. per acre will be enough—it may, however, be safe to sow 1½ lb. to provide against unskilfulness and destruction from insects.

Time of Sowing.—As before stated, the seed should be sown about the 25th of July. When sown, they should be harrowed in with a *light* harrow, and rolled immediately afterwards.

After Culture.—So soon as the plants come up, sprinkle them over with fish oil—repeat this each morning until the plants get into the rough-leaf. If it should not be convenient to sprinkle the plants with fish oil, sow ashes, or lime, over them, each morning early, while the dew is on their leaves, from the time the plants first come up until they get into the rough leaf. A mixture of plaster and salt, is also good, to be used as recommended above—so also is soot and salt.

When the plants begin to bottle, that is to form the bulb, run a harrow through them—this operation serves the double purpose, of partially thinning out the plants, and working them at the same time. In a week from this time, the plants should be finally thinned out, so as to stand from 6 to 8 inches a part—they should, while undergoing the process, also be worked with the hoe and hand, so as to clean out all weeds and grass—after an interval of 8 or 10 days, give another and final weeding, and your culture will be completed; and if your soil is adapted, has been well manured, well ploughed and harrowed, the season permitting, you cannot fail to make a large crop.

Peach trees.—Examine the roots of your peach trees for worms, and pursue the treatment we advised last month.

Catterpillars.—Examine your fruit trees, and if there be any catterpillar nests on them, take them off and burn them.

Pears, Plums and Cherry trees.—If there be any blighted limbs on these, cut the blighted parts off into the sound wood, and burn what you cut off. Examinations should be repeated often, as it frequently occurs, that large portions of a limb may be saved by timely resort to the remedy.

Budding and inoculating.—*Plums* and *Cherries*, *Apricots* and *Pears*, may be budded towards the last of this month.

Orchards.—Any decayed fruit which may fall, should be picked up and given to the hogs. If there are any decayed limbs on the trees, they should be cut off clean to the sound part and the wound be made smooth, and treated to a dressing of a composition made of 2 parts fresh cow-dung, 1 part lime, 1 part ashes, and 1 part salt—or a mixture of equal quantities of rosin, beeswax and turpentine, to be melted and thoroughly stirred together and put on when gently warm.

Rutabaga Turnips may be sown any time from the first to the middle of this month. For the best mode of culture, &c., we refer to our monthly advice upon this head in our June number.

Root crops, generally, must have the earth well stirred, and be kept clean from grass and weeds until you lay them by. Cleanliness in growing roots, is quite as necessary as it is in the human person—in the one case, the pores of the earth are opened, in the other those of the human body.

Bushes, Briars, Weeds.—Make war upon these with the resolute determination to destroy them, seed, root, and branch.

Compost Heaps.—Give to the formation of these your most ardent attention—devote the time of a hand and a team, in the collection of materials, and take our word for it, you will find profit in such occupation; and before your hand may begin such work, impress this truth upon his attention, that every thing that will rot will make good manure.

Wet lands.—Have you any arable lands of this description? If you have, you should, by all means, have them drained—once relieved of their excess of water, the texture of the soil will be improved, its productiveness increased, it will be earlier, easier to work, will raise better products, and withal be more healthy.

Deep Ploughing.—As you will soon be breaking up your wheat grounds, let us say to you, that deep tilth is necessary to enable the soil to do full justice to its productive capacities. For the reasonableness of the thing, we refer you to an article in this month's number, under the head of "*Deep ploughing—the effects of Lime*, &c."

Sprouting.—Attend to this work during this month and the next. Gather the sprouts in piles, and when dry burn them, and sow the ashes on your meadows as far as they will go, or mix them in your compost heaps.

GUANO.—As many of our friends will be using this article in seeding their wheat, we deem it our duty to advise them, that as soon as they get their Guano home, to intimately mix a peck of plaster with every hundred pounds of it, and place the Guano in tight hogsheads or casks, until needed for use—and furthermore, that Guano, and all kindred manures, should always be ploughed in—that being a necessary precautionary process, to prevent loss from the escape of the volatile gases, which, in such manures, form the chief elements in production. Guano if properly managed, is a cheap and

efficient manure; *four hundred pounds* of it, being sufficient to sustain the crops of an entire rotation; but if used without the care necessary to impart to it the power of retaining its ammoniacal salts, its greatest power will be expended in the first crop.

We have from the first introduction of Guano as a manure into our country, contended, that to promote its durability of action, and economise its use, it should always, previous to its application, be incorporated with some substance whose affinities for ammonia were such as to attract, condense, and give it fixedness; for which purpose we have recommended the mixture of either pulverized Plaster or Charcoal—that, when thus mixed, that it should be ploughed in to the full depth of the furrow—that all topical applications of Guano were injudicious and wasteful, as the *heat* and *atmosphere*, when it may be placed on, or near the surface, are not only calculated to drive off the carbonate of ammonia which may be already formed, but to hasten the conversion of the other nitrogenous matter found in Guano, into the ammoniacal form, thereby encouraging its escape, and consequent loss to vegetation. When either pulverized Gypsum or Charcoal is incorporated with Guano, the volatile portions of the latter are seized upon by either of the former, and rendered comparatively fixed, to be drawn upon by the roots of the plants, as their necessities may require nutrition. Now such is the affinity which Sulphuric acid, one of the constituent elements of plaster, and ammonia, possess for each other, that by contact, the sulphuric acid in the plaster combines with the ammonia, and forms the sulphate of ammonia—while the carbonic acid combines with the lime,—thus double compounds are formed, neither of which are volatile. A peck of plaster will give fixidity to the ammonia in 100 lbs of Guano, and a bushel of finely ground Charcoal, would perform the same office.

We have been asked, "whether the liming of land diminishes the action of guano?" Our answer, is,—that any contact between freshly slaked lime and guano, would not only drive off any already formed ammonia, but hasten the formation of more, and drive that off also; and, as a necessary consequence, very greatly "diminish the action of Guano;" for the effects of depriving it of its ammonical salts, would be to abstract from it those substances which impart to it its greatest energy as a fertilizer of the soil. Now, if any one doubts that such would be the effect of contact between lime and guano, he can easily test it, by mixing them together in small quantities—a spoonful of each will settle the question in a few minutes—no matter how strong the guano may smell of ammonia before the admixture with lime, it will not be long before that smell will be dissipated and mingled with the air. Plaster will also deprive guano of its ammoniacal smell, but its action is the reverse of that of the lime, as we have before shown; the carbonated ammonia of the guano unites with the sulphuric acid of the plaster, and instead of dissipating and driving it off, to be lost, its action is, to save it and keep it in store for the soil and its growing burthens.

Lime which may have been on the land a year before the application of *Guano*, would not injuriously affect its operation, because, in that time, the lime would have reabsorbed carbonic acid and become mild.

Land we should think, might be *top-dressed* with lime that had been some time slaked before its application, the same year that guano was applied, provided the guano had been treated to plaster or charcoal, previously to its being ploughed in.

On light sandy soils, *unless they are rich in mould*, it is indispensable to the success of the application of Guano, that it be mixed with plaster or charcoal, to impart to it fixidity, as the access of heat, air, and moisture, to such porous soils, accelerates decomposition with telegraphic despatch, the silica having no power of retention, of itself. On the other hand—*clay* and a *clay loam*, from their affinity for, and capacety to condense and retain ammonia, would exert a conservative power:—the effects of either of these, would be to fasten and utilize, instead of wasting ammonia.

We desire our readers to bear in mind:—that all top-dressings with Guano, whether followed by harrowing, or not, are wasteful:

That plaster or charcoal should always be mixed with guano, and then, that it should be ploughed in:—That where plaster or charcoal may not be obtainable, that 2 bushels of clay and 1 of salt, if thoroughly incorporated with it, will fix the ammonia in 200 lbs of Guano, and that, when ploughed into light sands, the roller should be freely used.

Setting Timothy Meadows.—If you design setting a timothy meadow, you should do so in *August*, therefore, we seize the occasion to say, that your field would be the better of two ploughings, and that you will find your interest in ploughing deep; that the ground should be well manured, and thoroughly pulverized by repeated harrowings and rollings. We prefer sowing timothy by itself, as we know of no other grass that comes into flower at the same time.

A good manure for a timothy meadow, is in the proportion of 50 bushels of ashes, 10 bushels of bone earth, and 2 bushels of salt, per acre, to be formed into compost, and whenever the mass gets hot, (which can be ascertained by inserting a stick into it) it should be shoveled over. When ready to sow your seed, broadcast this compost over your field, harrow it in well, then sow your seed and harrow it in *lightly*, and roll the ground. From 1 to 1½ peck of seed, per acre, is the proper quantity.

If you desire to combine in your meadows the *double* character of *hay* and *pasture*, you may effect your purpose, by sowing at the same time you sow your timothy seed, half a bushel of Red-top, and 1 bushel of Orchard grass seed. These two latter grasses afford plenty of *aftermath* for grazing, whereas timothy does not to any available extent. If, however, you design your hay for sale in a city market, the timothy alone will sell best; though, for farm purposes, we think hay made from the mixed grasses, would be greater in bulk, and more acceptable to the stock. Orchard grass seed should always be moistened a day or two before being sown, and then mixed with ashes to separate them. Thus prepared, they vegetate much quicker, and with greater certainty.

Buckwheat.—This grain should have been sown last month; you may, however, sow it any time up to the 10th of this month. Bone-dust or Guano will ensure you a good crop—10 bushels of the former, or 200 lbs of the latter, will go over an acre. Sow from 2 to 3 pecks of seed per acre, harrow it in, and finish your work by rolling.

It is becoming the custom with some farmers, to sow their rye with their Buckwheat, leave the stubble of the buckwheat tolerably long, with the

view of protecting the Rye through winter and early spring. As soon in spring as the frost is out, and the earth dry enough, they roll down the buckwheat stubble, which answers, by its shade, and slow decomposition, to farther assist the rye crop.

There is another custom, in this connection, which we shall state. It is this—Buckwheat is sown with Rye, in August; the former grows until the first frost, when it falls and affords protection through the winter to the Rye plants; in early spring the field is rolled, the buckwheat pressed down to the earth with the roller, where it performs the same offices as detailed above, and is said to be a valuable auxiliary to the rye, encouraging its growth, by its shade of the ground and moisture, besides contributing considerably, by its decomposition, to its nourishment,—and, we think we may add, that it would increase the attractive and absorptive powers of the soil, as its capacity in this respect, is always augmented by moisture, and hence it would derive considerably more benefit from the depositions of the dews.

Liming Land. If you have any lands that require liming, it would be well to apply either this fall. You may either previously plough or harrow the land; in either case, we believe it would be well to harrow after spreading the mineral. For a satisfactory view of the action of lime and marl, the reader is referred to the article in this month's number, bearing the caption of "*Deep ploughing, effects of lime, &c.*"

Broadcast corn. As the pastures will be giving out in August and September, it would be well to put in an acre for every ten head of cattle, of broadcast corn, or millet. Either of these will furnish luxuriant supplies of green food to soil the stock upon, when the pastures and ranges cease to do so. It is, however, necessary that the ground on which either may be grown, should be well manured, thoroughly ploughed, and thoroughly harrowed and rolled.

If the cattle were yarded during the nights of August and September, their yards bedded with marsh mud, woods' mould, or other similar substances, a very considerable quantity of good manure could be made—a quantity worth infinitely more to the farmer, than the expense of growing corn or millet, besides the satisfaction he would derive from the fact that his animals were well provided for,—a fact that could not fail to be rich in the reward of delighted feeling with which it would fill his bosom. Again, there are other considerations, which are not without force; it would increase the quantity of milk yielded by his milch cows, his good wife would be able to make more and richer butter than formerly, and at seasons too, when butter is scarce and brings good prices; and thus would the farmer's revenue be increased, while his stock would come into their winter quarters in good condition, a matter which every farmer knows to be of great importance, and that it tends to lessen the expense of our winter keep.

Fences. See that these are at all times kept in a condition to keep the cattle and hogs out—the short commons of July pastures, are very apt to make these animals very sharp sighted and persevering after more sumptuous fare; and therefore, farmers cannot be too vigilant in the examination of their fences, nor too prompt to repair every panel that may need it.

ON THE VALUE OF LIME.—*Hill Carter*, Esq. of Va. in a letter to Jno. R. Garnett, Esq. which we have been requested to publish from the Southern Planter, gives the following as his experience on the use of lime:

In reply to your desire to know the comparative value of stone and shell lime, I am unable to inform you, as I never made a fair comparison. The fact is, as long as we could get shells cheap, say from 62½ to 75 cts. a hogshead, we burned them ourselves; and continued to use the shell lime; but when the shells became scarce, dear, and difficult to procure, we had to resort to stone lime from the North—those who had not marl. I believe they are both equally good, as to the effects on our land, though the shell lime, as long as we could get shells, was much cheaper for those who had plenty of wood and force to burn them.

We used to appiy (at least I did,) 6 hogsheads of shells to the acre, which made something like 100 bushels of slaked lime to the acre on our corn land after it was broken up, and harrow the lime in. When I began to use stone lime from the North, either Baltimore or New York lime, I put 100 bushels of slaked lime to the acre, on the first application; but many of our most judicious farmers prefer to put only 50 bushels on the first application, and repeat with 50 every rotation of crops, until the land has lime enough, and I dare say it is the best way; at least it is the cheapest and quickest way to get over the land. I have gone over my whole estate with lime, either stone or shell or marl, and I am confident I have doubled the crops by it. I am now going over a second time at the rate of 30 bushels of lime to the acre, and the second application is very apparent in its effects. The fact is, I believe, that all our lands this side of the mountains are deficient in lime, and there is no successful farming without it, and you cannot go amiss in the use of it; and as to the comparative value of lime—that which you can get cheapest, and most convenient to haul out, is the best in my humble opinion.

Lime, either shell, or stone, or in the shape of rich calcareous marl, produces most decided effect on our lands; it ensures clover on land that would never bring it without, and clover judiciously used will improve any tolerable land, which is not too sandy, or too stiff and pipey, as we call it here.

Before the general use of lime in this part of the country, either marl or lime, (and to Edmund Ruffin, Sen. we are indebted for the general use of it,) we thought the alluvial bottoms of James River were the only valuable lands; but we now find that high lands, which were formerly considered of little or no value, are becoming by the aid of lime and clover, very valuable, and when they are near enough to the river to use lime, say within two or three miles, are the cheapest lands for their value in the world, for you can get them for little or nothing, and improve them with perfect certainty, with lime and clover.

LIME—ITS USES—AND QUANTITY.

To the Editor of the American Farmer:—

Sir:—I am gratified to find by recent publications, that the opinion is becoming more prevalent among intelligent farmers, that a much less quantity of lime than was formerly used, is sufficient for all immediate agricultural purposes. The extravagant application of it in England, where from 150 to 600 bushels was for many years the quantity put on the acre, served to lead many astray here in this country, and hence the too free use of it. I believe that there is no *immediate* benefit to be derived from a

greater application than 50 bushels to the acre at any time, that quantity being sufficient to answer all the purposes of melioration for several years; it being competent to give heart and fertility to almost any soil, with the aid of a clover-ley to push it. If 50 bushels then, will answer, much of the objection against lime on accoount of its heavy cost is removed, and the ability to use it is increased fifty per cent, and instead of liming one acre, the farmer may lime two, an object of high import to one of limited means.

Connected with the use of lime there is one fact which I desire most sincerely to impress upon the readers of your valuable periodical,—that it should never be applied without giving it *material* to act upon. Upon all new grounds, upon grass swards, and upon clover leys, it may be most advantageously applied. If there be a heavy crop of weeds and stubble on the field, there it may be also used to decided advantage; but let it be applied wheresoever it may, it should have something to convert into a condition of vegetable food, as therein, next to neutralizing the acidity of the soil, does its chief virtue consist. If there be no clover-leys, grass-swards, or crops of weeds, to turn in with it, a very happy substitute may be found in a crop of buckwheat, rye, or oats, which as either gets into flower should be turned in with it. Either of these substances will afford full scope to the action of the mineral, and amply renumerate the agriculturist for the time, trouble and expense of providing it. I will venture the assertion that a field thus treated which would not yield 7 bushels of wheat to the acre, may in three years be made to produce twenty bushels, and if judiciously cropped afterwards will retain its fertility for ten or fourteen years. If then this desirable state of things can be produced, should any farmer hesitate a moment of availing himself of all his resources, and of even straining a point, to place himself in a position so eligible and propitious? I think not. Present and prospective profit, alike combine to urge him to the course I have pointed out; nor should pride of occupation be wanting to stimulate him onward to a goal so worthy of his highest ambition.

Hanover, York Co. Pa. G. S. J.

The above from an intelligent Pennsylvania correspondent, whose experience and means of observation enable him to speak advisedly, deserves the consideration of every farmer.

For the American Farmer.

FARMERS, MAKE YOUR OWN CANDLES.—Take 12 pounds of alum for every 10 pounds of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow, so as to make a most beautiful article, for either winter or summer use, almost as good as sperm.

If the wick be dipt in spirits of Turpentine, the candles will reflect a much more brilliant light.

York County, Pa., May 20th, 1850. G.

Chili Wheat.—A correspondent in Pa. writes us, that he has growing a small lot of "Chili Wheat," which though sowed a considerable time after his main crop, the "Blue Stem," is equally forward—he states that it stood the winter well—he describes it as a large, plump grain, superior in size to the famous Blue Stem, and very white. If any of our readers have cultivated this description of wheat, we should be happy to receive their views upon its qualities, and adaptedness to culture in our country.

AMERICAN FARMER.

BALTIMORE, JULY 1, 1850.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS inserted at $1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher.

At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

Maryland State Agricultural Society.

The next Quarterly Meeting of the Board of Managers will be held on WEDNESDAY, the 7th day of AUGUST next, at 10 o'clock, at the Hall of the Society, in the city of Baltimore, 128 Baltimore street, in the American building. The officers of the Society, it is expected, will be present without further notice.

By order, CHAS. B. CALVERT, President.
SAMUEL SANDS, Secretary.

THE NEW VOLUME—MR. RUFFIN, OF VA.

We present the first number of our new volume to the public, under the most auspicious circumstances—It is now sixteen years since the commencement of our connexion with this journal, and at no time during that whole period, have our prospects of usefulness been so bright, as at the present—In addition to other reasons which might be enumerated, of our ability to render the present volume more interesting than any which has preceded it, is the fact, that we are authorized to promise to its readers, that *every number* of the "*American Farmer*" will contain a contribution from the pen of *Edmund Ruffin*, Esq. of Virginia, formerly editor of the *Farmer's Register*, and the author of the work on *Calcareous Manures.** The simple announcement of this fact, we deem sufficient to give assurance to our friends, that any rational promise which they may make to their neighbors to induce them to subscribe, of the usefulness of our journal, will be fully realized—The essay, which is commenced in this No. from the pen of Mr. R. is an earnest of what our readers are to expect from this source. It is upon a subject, (Draining,) than which few can exceed it in importance, and the experience which the writer has had, enables him to be a safe teacher to others who are yet to undertake so difficult and costly a work—that *experience* has no doubt cost him much in labor and money, and we deem ourselves fortunate in being enabled to give the benefit thereof to our patrons.

*This occasion will be used to annuonce in general terms, that we have secured the privilege to issue as a separate and distinct publication, a new edition of Mr. Ruffin's "*Essay on Calcareous Manures*," much altered from the preceding edition (of 1842) and also much enlarged and improved, by aid of the author's more extended experience. The form and manner of issue, &c. of this work have not yet been

fixed; and the final arrangements will depend on the indications which may appear of demand for this new and enlarged edition. The author, when preparing this edition, had not designed to publish it, nor expected it to appear during his life. But the circumstance of our having recently requested permission to print the work, (to which consent was readily given—) elicited the information of the existence of the later prepared matter for a more complete and last edition, and resulted in the design here indicated.

The following offers we make to those who may exert themselves to obtain the largest list of subscribers to the 6th volume.

For the largest list of new subscribers, a Silver Pitcher, of the value of - - - - - $50

For the next largest list, a Silver Goblet, valued at - - - - - - - $35

For the 3d do do $25

For the 4th do do $15

For the 5th largest, agricultural implements, or books to the value of $12

For the 6th do do $10

For the 7th do do $8

For the 8th do do $5

For the 9th do do $3

The cash for the same to be paid before the meeting of the State Society, on Tuesday evening, the 22d Oct. at 7½ o'clock, at which time the lists will be closed, and the prizes awarded at the time of the distribution of the State Society's premiums. Address, SAML. SANDS, Publisher Am. Farmer, 128 Baltimore St. Baltimore, Md.

☞The Hon. Willoughby Newton, of Westmoreland Co. Va. has accepted the invitation of the Maryland State Agricultural Society to deliver the Annual Address at its meeting in October next.

Agricultural Implements.—We direct the attention of our Agricultural friends to the *supplement* which accompanies the present number of our journal—its pictorial display of the implements of husbandry cannot fail to be of interest to those among them who desire to keep pace with the improvements of the day.

During the early part of the past month, we paid a visit to the workshops and warehouses of most of our enterprising manufacturers, and were delighted to find their assortments so ample, so diversified, and so characterized by all that gives strength and usefulness to machinery. Simplicity of principles—durability of materials, and faithfulness in workmanship pervaded throughout. But it is superfluous to speak of the character of the construction of the implements and machinery which we saw, as the reputation of the artizans and mechanics of Baltimore throughout the country, stands unrivalled, and have long since won the golden opinions of those who are competent to judge. It is not, however, out of place here to remark, that in no city in this Union can there be found a greater variety, more useful, and truly valuable body of labor saving machinery, adapted to the purposes of the farmer, the planter, and the gardener, than in Baltimore. In each of these departments, the assortments are abundant and perfect, and as a proof that the skill of our enterprising manufacturers have been duly appreciated, we will mention the gratifying fact, that there is no other city whose aggregate sales are greater than are those of the agricultural implement makers of this city—a strong proof this of the genuis and successful enterprise of Baltimore mechanics!

Guano and Bone Dust.—In our pages for this month, among many other valuable papers, will be found one from Mr. *E. Stabler*, of Montgomery Co. on the application and comparative value of guano and other manures—We are indebted to the Rev. *Jas. Fife*, of Albemarle, Va. to whom it is addressed, for a copy of the letter of Mr. Stabler, and our readers will no doubt join us in our thanks for the permission which has been granted to present to them the testimony of so experienced a farmer as Mr. Stabler, on a subject which is now of all-engrossing interest to every landholder.

☞Dr. Higgins' Report is in press, and will be forwarded to those ordering, as soon as it is printed.

To Correspondents.—We must again beg the indulgence of our friends. In addition to sundry communications heretofore announced, and in type, we have received during the month, one from Patuxent Planter—and the paper on Rice, from the pen of Dr. Huger of S. C.—and several others—which we are compelled to omit. We will try and bring them all up in our next.

Guano.—We are informed by *J. C. Walsh*, Esq., chairman of the committee appointed at the last quarterly meeting of the Maryland State Agricultural Society, to confer with the members of Congress from this State, on the subject of the Guano trade, that they visited Washington, in the discharge of the duty assigned them, and in their intercourse with the Congressional Delegation from Maryland, and also with the Hon. Mr. Clayton, Secretary of State, they received every assurance that the subject would receive that attention which its importance demanded.

Mr. Pratt, one of the Senators from this State, subsequently presented a memorial from the committee, protesting against the present monopoly of the trade by Great Britian.

Mr. P. offered a resolution of inquiry of the Secretary of State, whether by existing relations with Peru, citizens of the United States are on an equal footing with citizens of other governments, in respect to the trade with that country, and, if not, whether it is probable a treaty could be made placing them on equal footing?

After some approbatory remarks by Mr. Webster, the resolution was adopted.

We hope the American people will now be enabled to get some information upon this subject. There seems to have been a studied mystery in regard to it, and those most interested are groping in the dark, as to the future prospects of supply. The farmers of Maryland, Delaware and Virginia, should continue to urge upon their representatives at Washington to aid in the movement made by the Agricultural Societies of this State, to obtain a fairer trade in this fertilizer—so that it may be taken out of the power of the present monopolists, who, by their agents in this city and New York, can control the price at pleasure.

We stated in our last that contracts had been offered to supply Guano at $46 the long ton. Large contracts were made at that price, but the whole of the expected supply this fall is engaged by speculators and dealers, and the price will not be likely to range less than $47 to $48 the short ton. The following is from a source which, we think, may be relied upon with confidence. It was furnished at our request:

"It was anticipated earlier in the year that the supplies of Peruvian Guano this summer would be

large, and the article would consequently rule at a very low figure the entire season; but recent advices from Peru, and a more accurate knowledge of what has been shipped, have shown the falsity of such estimates, and indicate a scarcity of the article and a consequent high price this fall.

"At the present time there is no guano in the hands of the agents, and the supplies held by dealers are very small, while every cargo has been sold which will arrive before the first of October. There are five cargoes expected before that period, making in the aggregate about 2000 tons, one of which will be landed at New York, and will be divided between this and the Virginia market. Another will be landed at this port,* and the larger portion transhipped to the District. The third will proceed direct to Alexandria, and there discharged. The fourth and only entire cargo will be landed here, while the fifth will proceed direct to Richmond. The demand at this point alone would require all that is expected to arrive from the coast of Peru; but in addition to the usual demand, the dealers in New York and Philadelphia will have but this place from which to derive their supplies.

"Under this state of affairs, we would advise our country friends who intend applying guano, to procure their supplies early in the season, and as we learn many have made contracts at low rates, for what they intend using, we think they had better not depend on them, unless *well assured* the contractors will be *able* to *fulfil* their engagements."

* Since arrived at this port.

COMPOSITION OF, AND NUTRITION IN, VARIOUS GRAINS.

As the nutritive properties of the various grain crops, as well as their organic proportions generally, involve questions of profound interest in the economy and support of animal life, we make the following extracts from the able work of professor John P. Norton, entitled, "*Elements of Scientific Agriculture*," just published:

"WHEAT is one of the most important of all crops. The grain contains from 50 to 70 per cent of Starch, from 10 to 20 per cent of gluten, and from 3 to 5 per cent. of fatty matter. The proportion of gluten is said to be largest in the grain of quite warm countries.

It is a singular fact, that in all the seed of wheat, and other grains, the principal part of the oil lies near, or in the skin, as also does a large portion of the gluten. The bran owes to this much of its nutritive and fattening qualities. Thus, in refining our flour to the utmost possible extent, we diminish somewhat its value for food. The phosphates of the ash also lie to a great degree in the skin. The best fine flour contains about 70 lbs. of Starch in each hundred. The residue of the 100 lbs. consists of 10 or 12 lbs. of gluten, 6 to 8 lbs. sugar and gum, and 10 to 14 lbs. of water, and a little oil."

"RYE flour more nearly resembles wheaten flour in its composition than any other; it has however, more of certain gummy and sugary substances, which make it tenacious, and also impart a sweetish taste. In baking all grains and roots which have much starch in them, a certain change takes place in their chemical composition. * * * By baking, flour becomes more nutritious, and more easily digestible, because more soluble."

"BARLEY contains rather less starch than wheat, also less sugar and gum. There is little gluten, but a substance somewhat like it and containing about the same amount of nitrogen."

OATS.—"Oatmeal is little used as food in this country, but it is equal, if not superior in its nutritious qualities to flour from any of the other grains; superior I have no doubt, to most of the fine wheaten flour of northern latitudes. It contains from 10 to 18 per cent. of a body having about the same amount of nitrogen or gluten. Besides this there is a considerable quantity of sugar and gum, and from 5 to 6 per cent of oil or fatty matter, which may be obtained in the form of a clear fragrant liquid. Oatmeal cakes owe their peculiar agreeable taste and smell to this oil. Oatmeal then, has not only an abundance of substance containing nitrogen, but is also quite fattening. It is in short, an excellent food for working animals, and, as has been abundantly proved in Scotland, for working men also."

"BUCKWHEAT is less nutritious than the other grains which we have noticed. Its flour has from 6 to 10 per cent. of nitrogenous compounds, about 50 per cent. of Starch, and from 5 to 8 of sugar and gum. In speaking of buckwheat or of oats, we of course mean without husks.

"RICE was formerly supposed to contain little nitrogen, but recent examinations have shown that there is a considerable portion, some 6 or 8 per cent. of a substance like gluten. The per-centage of fatty matter and of sugar is quite small, but that of starch much larger than in any grain yet mentioned, being between 80 and 90 per cent., usually about 85."

"INDIAN CORN is the last of grains that we shall notice. This contains about 60 per cent. of starch, nearly the same as oats. The proportion of oil and gum is large, about 10 per cent.; this explains the fattening properties of Indian meal, so well known to practical men. There is besides these, a good proportion of sugar. The nitrogenous substances are also considerable in quantity, some 12 to 16 per cent. All of these statements are from the prize essay of Mr. J. H. Salisbury, published by the New York State Agricultural Society. They show that the results of European chemists, hitherto published, have probably been obtained by the examination of varieties inferior to ours; they have not placed indian corn much above the level of buckwheat or rice, whereas, from the above, it is seen to be "in most respects superior to any other grain."

"SWEET CORN differs from all other varieties, containing only about 18 per cent of starch. The amount of sugar is of course quite large; the nitrogenous substances amount to the very large proportion of about 20 per cent., of gum to 13 or 14, and of oil to about 11. This, from the above results, is one of the most nourishing crops grown. If it can be made to yield as much per acre as the harder varieties, it is well worthy of a trial on a large scale."

GLUTEN and NITROGENOUS substances are those which form muscle, or flesh.—*Ed. American Farmer.*

NEW OXFORDSHIRE SHEEP.—We direct attention to the advertisement of Mr. C. B. Reybold, in this No. of the Farmer. The admiration which his sheep has elicited at our State fairs, and the demand which is constantly made for them, are the best evidences of their value. We are glad to find that the valuable breeds of sheep are being disseminated throughout our state, and were it not for the great risk of loss, from worthless dogs, Maryland would soon become one of the great wool growing states in the Union, and a large increase would be made to our agricultural productions thereby.

For the American Farmer.

GUANO.

The tendency of the apparent popularity of this article, is, to one or the other of two events, in the poor Atlantic regions of these States; especially the Middle States. It will produce either a grand revolutionary, *renovating* change in our agricultural results; or, prove one of the most remarkable *humbugs* of the day. Many of our farmers are already satisfied, that the latter is no longer to be apprehended; believing the claims of Guano to be established beyond all successful opposition. For the sake of our nativity—this beautifully located region, and more especially the tide-water region of old Virginia, I should rejoice in the consummation of an event, so greatly to be desired. I should rejoice to see all our people satisfied at home; with the prospect before us, of keeping our children, and children's children, in their father land, to generations unborn. This can be accomplished only by an improvement in agriculture. Progress in any, and all other departments will be vain, unless we can so improve our lands, as to enable them to bear divisions and sub-divisions, according to the increase of population. While I believe with all my heart, that our country, though truly and extensively poor, is fully capable of a thorough and adequate renovation—one, equal to the wants of generations to come; I still have my doubts whether this can be effected by Guano, even at *reasonable prices*. I feel confident that other, and better adapted means are available, and will be adopted in preference to Guano, in the course of a few years. The present spirit of enterprize, will doubtless work well among the masses, no matter how dear may be the cost of "*the whistle*," to the few. I may be wrong, and only ask for conviction, in order to a change in my relative position. As at present advised, I belong to what I wish to take the liberty of calling the *Ruffin Permanent Improvement School*. I trust that this gentleman will not be offended at the liberty which I thus take with his name. I conceive it to be no more than a just tribute of respect to the noble stand which he occupies in our country. While I have no personal acquaintance with Mr. Ruffin, I take pleasure in ascribing to his long and well-directed efforts for agricultural improvement in our darkest day, much of the zeal which manifests itself in divers *short cuts* in the present day. While we are not willing to *follow* him, we are still, not a little anxious to keep up with him, if not to surpass him. Be it so, if possible; he would be among the last to repine at it, unless I am greatly deceived in him.

I before expressed a doubt of the availability of Guano, in the renovation of our lands extensively. This I know to be an exceedingly unpopular position;—approaching, in fact, to actual *disgrace*, in the estimation of many. I know not a single pen, in my behalf, to be invoked. I may be deemed captious—mad, or something worse, in daring to attempt to scan the claims of Guano. But I ask a fair and patient hearing, and nothing besides—but *justice*. When convinced of error, I will pledge myself with all zeal for *the truth*, although my best costume be but a *turned coat*. Expecting hot work, under great odds, the reader will bear with me a little, while I throw up a few fortifications, in order to an honorable defence.

Though an *anti-creed* man generally, having to oppose those who are the other way of thinking, it may be well to define my position in a few brief articles of *faith*.

1. I believe in the value of manures of various kinds.

2. Comparatively, I believe in permanent manures, as being more valuable than transient manures.

3. I believe lime, marl, in all its forms and combinations, ashes, composts which may be made on nearly every farm, stable, barn-yard, hog-pen, and such like, to be permanent manures.

4. I believe most of the agricultural salts, poudrette, and such like, to be good, as far as they go; but being necessarily too limited in quantity, without an outlay too great to render them permanent, cannot be used, except to a limited extent.

5. As far as I have tried it, or observed its effects in the hands of others, I believe Guano to be the most powerful agent in the promotion of vegetation, that I have ever seen employed. But,

6. I believe it to be the most transient, and judging hypothetically, the most exhausting of all the exhausting agents known.

7. And lastly, I believe the cost of Guano, to be too great, considering the common casualties attending all agricultural productions, to justify its general adoption, and extended application to farming purposes.

Having thus candidly stated my creed, and defined my position, it will be perceived that a fair deduction will show that, upon the whole, I am decidedly in favor of applying any given amount of capital, which a farmer may have to spare, to the raising of domestic (chiefly) manures; rather than to the purchase of Guano. For instance, that I may be more distinctly understood. A farmer who has $150 to lay out in Guano, had better apply the same, in the form of a man, boy, horse and cart, in separate labor for a year, raising manure.

In the one case, the capital would buy only three tons of Guano, which would be applied to about 25 acres of land in wheat, which might not only produce a good return of wheat, but also a good growth of clover. Perhaps, (which is, I think, very doubtful, except on *good calcareous* soils,) the clover might renew itself afterwards, and so keep up a state of improvement, for a few years, but still there would be but 25 acres, benefitted by the outlay; whereas, the result of the other plan, would not only improve richly, and permanently, 25 acres, over and above the usual products of the farm in manure making, but the same hands would be able to treat probably 25 more, to a respectable dressing of trash from the woods. My opinion is, that $150 thus applied, in separate farm labor, would far exceed, in ultimate results, the other plan. Besides this, many of our farmers have much surplus labor, but not surplus cash.

The foregoing thoughts are respectfully submitted to the readers of the Farmer, as preliminary to a few short numbers on this very important subject. Brevity is designed. Information is earnestly sought. Let *the truth* be elicited if possible. I felt, with many others, great disappointment at not receiving light upon this subject, from the enlightened pen of your correspondent, Mr. Newton. May we not yet hope for it? Many among us, are so perfectly infatuated by the present growth of their wheat on Guano, (and indeed it is lovely in appearance,) that the proprietors, of what they had been long accustomed to consider permanent, incurable poverty, begin to feel all the joy of "swimming apples."

In fact, we are daily approaching the conviction, that poor land is better than rich. As far as our experience has gone, it evidently leads to this impression. The "*poorer the land—the greater the profits,*" is the common saying of the Guano men.

J. Du Val.

King and Queen County, Va., May 11.

IMPROVEMENT IN THE BREED OF HORSES.

To the Editor of the American Farmer:—

Sir,—To whatever system we choose to make the application, there is a great truth which never loses an iota of its force, nor never can, no matter who plays the part of a simpleton by disregarding its value. To wit:—"In order to effect any object whatever, we must necessarily employ means for its accomplishment, which, in their nature, are calculated to bring about the result intended; or failure and disappointment must inevitably and forever ensue."

It is my present purpose to show to farmers, the importance of attending strictly to this plain and simple truth, in regard to a matter in which I conceive the Agriculturists of the State of Maryland, particularly, are greatly at fault. I allude to the very prevalent practice of raising horses from such stock as cannot be supposed, by any rational induction, at all likely to produce any other than an animal of but little value, and indeed, as in perhaps a majority of instances, one, that if sold at 4 or 5 years old, will not command a sum sufficient to pay the owner for raising him. Now why persevere in such a course as this, when it is so easy, by the exercise of a little common sense, to ensure a different result? We all know that we still have some very fine horses in Maryland. It is, I believe, true, that at present the proportion of such is but small, compared with the clumsy, lubberly, ugly, and almost worthless number of stallions that are fattened up in the Spring of the year, and are travelled about the country, being let to mares at, perhaps, $3, $4 or $5, to ensure the owner of the mare a colt, which, in his turn, perhaps, is destined to go on propagating his worthless race, unless he happens to break his neck, when ridden from stand to stand; or, peradventure, in being led out of the stable.

I will now endeavor to place this subject in a clear point of view, by copying from the 9th volume of the old American Farmer, (page 25,) an article headed—"Stumbling Horses—Improvement Farmers." The writer hails from "Montgomery Co., Md." (1827,) and says,—"I have lately witnessed a dialogue between two of my neighbours, with which I felt so much interested that I cannot resist the temptation to give you the outlines, for publication, if you think proper. It took place between a Mr. Hopeful and a Mr. Certainty, two farmers, as they rode along the road, and originated from the circumstance of Mr. Hopeful's horse having fallen down with him, and his rider's narrow escape from *a broken neck.*

Mr. Hopeful.—Confound the horse:—this is the third time he has been near killing me.

Mr. Certainty.—Well, Mr. Hopeful, I am astonished that you should persist in riding him.

H.—Bless your soul, man, what am I to do? I own six horses, for which I have paid nearly as many hundred dollars; there is only this, and one of my carriage horses, that can make any headway at travelling; and as for the carriage horse he even *blunders in harness.*

C.—Well, sir, what you are to do, I know not; but I can tell you what I would be at pretty quickly.

H.—Indeed, sir, I would be thankful for any information that would be likely to enable me to procure a good saddle horse. That is to say, one that would carry me easily and safely to myself, say fifty or sixty miles a day upon an emergency, without being distressed. And if I could possibly procure him, I would cheerfully pay $200 for another, that could "lie by the hounds" for a few hours. Would you advertise for a horse of this description, sir?

C.—No, sir:—In that case you might possibly be imposed upon by some Jockey. You say you would give a generous and even a high price. Now, for the present, procure a three or four year old colt or two, that have come of mares that have performed well, and that have for their sires such horses as are certainly of the purest "blood," and the best stock. Break these with care, and your present wants are supplied at once. Then look out for a young mare, that as much can be said in favor of, and buy her at almost any price rather than miss. You will then have an opportunity of raising horses of the very first order, at comparatively a small expense.

H.—I perceive, sir, that your plan is plausible; but it strikes me that there are great difficulties in the way. In the first place, there is not a single horse in our county of the description you mention—and———

C.—One thing at a time, sir.—You say there is no such horse in the county. Do you mean by that, that there is none in the State, or none in the country? Where is Nathan Luffborough's horse, Rob Roy?—Charles Sterett Ridgely's horse, Mark Anthony?—and Mr. Skinner's horse, Rinaldo?

H.—I have never seen either of them; are they very fine horses, sir?

C.—Of the very first order.

H.—Where were they raised?—Can you tell me?

C.—Yes, sir. They were all three raised by Mr. John Randolph, of Roanoke; and if you will examine a stud book that Mr. Skinner has in his possession, you will find that their stock is equal to that of any horses in this, or any other country. And here you have lived and rode tumble down horses, within a few hours ride of two of them, and have never seen either, and, in fact, know nothing about them. Did you never hear of these horses, sir?

H.—Yes, sir, I have heard something of them, I think; but I always viewed the circumstance of raising a fine horse as a thing pretty much out of my reach.

C.—Well, now let me ask you a question, sir; suppose all others had done in this matter precisely as you have, do you think that at this time, there would have been a dozen fine horses in the whole state?

H.—Certainly not. But, sir, suppose you and I, and every one else who has it in his power to raise colts, were to put your plan into operation, the whole country would soon be overrun with———

C.—With what, sir, but first rate horses—the very thing we want; and then a really fine horse would cost no more than you now have to pay for an ordinary one, for this very good reason, that it costs no more, not a cent more, to raise such a horse, as you would now be willing to pay $200 for, than such an one as just now went well nigh to cost you your life. And then, my word for it, you would be willing to stop and rest, by the time your horse was tired; and more than that, we should not so often hear you say that you did not know whether your dogs took the fox or not. Tight Reign.

P. S.—Now, Mr. Skinner, (between us two,) I think it will not be doubted, but that there is a very large family of the Mr. Hopefuls, spread over the whole State of Maryland; besides a respectable number in some other places. I mean to apply the word respectable to their numbers only, and not to their standing as farmers. For however Hopeful they may be, notwithstanding it may seem a little paradoxical, I really think there is but little hope for them. Yours, &c. T. R."

So the matter stood in 1827. Now let us inquire how it will come out in 1850. How many men are there within half a day's ride of two of the finest horses in the United States, (viz:—Charles Carroll's Morgan horse, Black Hawk, for which horse he has just paid upwards of $1700. And Dr. Stockett's horse Cippus, who has run the 3 and 4 miles heats thirteen times, and won eleven of these races,) who have never even taken the trouble to look at them, and both in Howard district, 15 miles from Baltimore. And why? because one may perhaps charge him $15 to insure a mare with foal, and the other stands at $25, the season. I won't pay that price, says one;—that is too high for me, says another;—a third exclaims,—I'll pay $3 for the services of such a horse, or $4 is all he charges to insure a foal. Good honest brothers, know ye not that it will cost you as much to raise a horse that will only command $50 to $75, as it will to rear one that will bring double, or more than double, that price in any market? How long will ye persist in endeavouring by the loud language of your conduct, to demonstrate that two and two do not make four?

In the 7th volume of the old American Farmer, page 269, I find some further comments upon this subject, by a correspondent, also by the editor. The latter says—"There are nineteen counties in the State. Suppose these counties to raise an average of one hundred colts per annum; we are perfectly confident that if these were sired by thorough bred horses, of good size and figure, these 1,900 horses would average $50 more in the amount they would sell for, over and above the difference in the cost of the horses' services, and thus the State would realize a clear annual increase to its capital of $95,000.—True it is that one farmer will say, I should gain nothing; another, that I should not be benefitted—but it is undeniable, that the community, the agricultural community of the State, in the aggregate, would gain the $95,000—which are now lost, for want, as it would seem, of plain common sense, reflection and management! Now, how can any class of people expect to escape the charge of ignorance; how can they expect to be honored and respected; how can they expect their sons, if discerning and well educated, to choose, spontaneously, a calling, followed by those who thus expose themselves to the reproach of improvidence and want of common discernment in the cardinal points of their pursuit."

Now let us, who are so deeply interested in this matter, reflect, as the season of the year is at hand when our course will be taken in reference to the premises, that "whatever object we design to effect, we must necessarily employ means, calculated in their *nature*, to bring about the result intended; or failure and disappointment must inevitably and forever ensue." REFORMER.

P. S.—I might mention another horse, lately the property of Col. Capron, and now owned, I think, by John Ogburn, near the town of Liberty, Frederick County, (Md.) called "The Walden Messenger." This horse has stood two seasons in Montgomery County, and has left a progeny there, which promises a large remuneration to, I believe, every single individual who is fortunate enough to be the owner of one of his colts. I know positively that from $50 to $100, has been repeatedly offered and refused for colts of his getting, at from one to two years old. These are the kind of colts to raise. These will be good for something when they are raised. R.

[In addition to the above mentioned fine horses, Capt. Ward, and Col. Slaughter, of Culpepper Court House, Va., have obtained from the North, the very superior Morgan horse, *Messenger*—he was sired by McKinney's Sir Henry, and he by the celebrated Sir Henry, that ran the great race with Eclipse, beating him the first heat in 7 minutes 37½ seconds. Messenger's dam was sired by Fox's Duroc, his grand dam by the celebrated Morgan Messenger. He is a dark chesnut, has a long black mane and tail, is of great bone and muscle, 16½ hands high, and six years old this Spring.—*Ed. Am. Farm.*]

LARGE GOOSEBERRIES.—Having observed a notice of some large gooseberries growing in the garden of Mr. *James Lovegrove*, of this city, our curiosity, which we must confess, upon such matters, is full grown, induced us to visit his garden, in order to see and examine them, inquire into their culture, variety, &c. They were shown us by his excellent lady. The fruit was growing on two bushes, from which she had already picked four quarts, and, as I estimated, had as many more remaining on them. Unlike the bushes of professional gardeners, but little attention had been paid to pruning; *nature* had been *wisely* permitted to take its own course, with the exception of cutting off a few of the branches of old wood, to let in the sun and air. But notwithstanding Mrs. L. *has followed nature instead of fashion*, which in seven out of ten cases, operates as a tax upon production, her bushes have borne a luxuriant crop of very large berries; 6, which she politely presented us, weighed 1 oz 1½ dr. averdupois weight, the largest of which, measured three inches in circumference, around the middle. We have ever been opposed to the naked system of pruning, to which this delicious fruit has been subjected, and were pleased to find our views so strongly supported by the judicious practice of Mrs. L. We regret, however, that she could not tell us the name of the variety, as it is eminently worthy of being extensively cultivated—the only name she could give us, was—the "English" gooseberry—a name indefinite enough.

A USEFUL MACHINE.—A patent has been granted to Daniel D. Gitt of Butler township, Adams Co. Pa. for a machine which it is believed will be of great service to farmers—it is a simple machine to dislodge, and convey into the furrow, the rubbish which collects upon the coulter or cutter of the plough, in the operation of ploughing; it is worked by a lever attached to the handle of the plough.

One jerk of the lever by the hand of the ploughman, while the plough is in progress, will dislodge all rubbish which may have accumulated, thus saving the necessity of having a boy to follow, or stopping frequently to clean the plough. This improvement it is expected will be exhibited in operation at our next State Fair.

FALL EXHIBITION.—The prize list for the Fall Exhibition of the *Md. State Agricultural Society* was issued with our last No. and copies can be furnished at our office.

EXPERIMENT WITH THE COW PEA.

CHARLESTON, May 6, 1850.

To the Editor of the American Farmer.

Sir—The following experiment is transmitted to you in answer to your request in the April No. for further information on the subject. It was reported to the Strawberry Agricultural Society (consisting of the rice planters of Cooper River, Charleston District, So. Ca.) in 1848, by Dr. Benjamin Huger, a member, and a skilful and experienced planter. It establishes the value of the Cow Pea as a cheap and efficient renovator, even where unaided by other mauures, and is perhaps on that account more important than the experiments reported in that No. S. W. BARKER, Sec'y.

EXPERIMENT WITH COW PEAS AS GREEN MANURE.—"In the winter of 1845, I cleared up an old field which had for many years been left out of cultivation in consequence of its poverty, and was at this time covered with broom grass.

In the middle of February it was broken up with a bar share plow and listed, all the dirt being hauled up that could be collected.

On 25th March, the list was reversed and the bed made up into what had been the alley; and on the last day of the month it was planted in early peas at the rate of 3 pecks to the acre. The peas came up speedily, and the weeds at the same time so thick, that it was found necessary to pass the hoe through to give the peas air. This was contrary to my plan, which had been to allow peas and weeds to grow together and bed them all in for slips; but it was decided otherwise, as the peas could not spread in consequence of the growth of the weeds. The plant now began to grow well and luxuriantly, and early in June, I directed that the vines, leaves and peas should be listed up preparatory to planting slips. This was done and the vines laid down in good time. The season was good, but it was soon evident that the land was too poor to yield a crop; the slips looked badly during the season and the yield was very small. I was not disappointed in the failure of the crop, and determined to persevere, and if possible, reclaim the land. A ravine or gulley separating this field from the rest of the plantation, rendered it inconvenient to manure it in the usual manner. I was compelled to try the peas again as manure. On the 28th March 1846, the land having been previously listed up, 3 pecks of peas to the acre were again planted; the season suiting, the peas soon made their appearance, and on the 30th April I passed a hoe through them to check the weeds which began to overrun the peas. May 10th, the peas look well and flourishing; May 22nd, peas are full and plethoric in their appearance, and look like bearing; May 29th, peas are bearing, but not as I think sufficiently thick to be turned in; June 12th, peas are bearing quite thick; directed them to be listed up and laid down in slips in 2 or 3 days after listing; June 19th, peas all listed up but not planted in slips, as we have had no rain; June 20th, my slips were planted on 23d, and look fresh; the vines not wilted; July 3d, the slips have all taken; the season has been high and wet; July 17th, my slips are fine, much better than last year; season very similar to the last. My slips continued to thrive and flourish during the remainder of the summer, nothing occurring before the fall worthy of being noted except that they were very fine and luxuriant indeed. In due season they were harvested, but in consequence of my absence from home were not measured before being housed, and hence the accuracy so much to be desired was not attained. The size of the house, however, and a view of its contents, soon satisfied me of the abundance of the crop, and left no doubt on my mind of the value of the manure. During 1847, the same plan was adopted, and although the season was not a good one, (the planting being much later than usual,) yet the product has been very satisfactory, and I can without hesitation recommend it as a manure for slips at once cheap and easily accomplished. A plough will form the list and a few inferior hands plant a large quantity of land during the day. Where trash is distant, and the means of carting limited, I know of no means of manuring more satisfactory than peas of the early kind."

LOUISIANA—THE COW PEA—CHILIAN CLOVER.

MONROE, La. May 4th, 1850.

To the Editor of the American Farmer.

I have been a subscriber to your valuable work for several years, and after reading it some time I had an irresistible desire to become a planter, and after several years trying to wind up my mercantile business I finally succeeded in purchasing a plantation to my satisfaction, and whether I succeed or not, the American Farmer is accountable. So far I have done well. I bought on the 15th of January 1849. My crop of 210 bales of Cotton at present prices pays me 25 per cent. on my purchase money; besides an abundance of Corn and every thing else to maintain the plantation hands, stock, &c. My Pea Crop exceeds anything of the kind I ever saw; they were planted with the corn at the last ploughing, and by the middle of Sept. covered the field so that the stalks were hid; I gathered as many peas as I wanted, and my neighbours came with their hands and wagons and took load after load until they were satisfied. I then turned in my stock of Mules, Cattle and Hogs, and they remained in the field all winter and became perfectly fat. I have ploughed it up and planted it in cotton, and the peas that was left have come up as though I had sown them broadcast, having remained in the ground all winter. I take the liberty of sending you a few peas in this letter, as I see in your April No. you requested one of your subscribers to do so, and his statement that he could not. I think they will mature in your climate. I have no name for them, but my Overseer calls them the prolific Cow Pea.

I see under the head of Clover for the South that there has been obtained at the Patent Office, Washington, the Chilian clover seed, which had been sown and found to stand the hot suns of the South. I am anxious to know if it is used in Maryland, and if the seed could be procured. I am in the habit of looking to your good old State and the Farmer for improvements and everything useful in Agriculture, and wish it, (the Farmer) was more generally read in this section. I have intended to get up a club to send on for the Farmer, but the bad crop of last year, and the present very unfavourable season has induced me to put it off for the present. We have had constant rain here for three days, and our River is within a few feet of the highest mark. This portion of the country has never been known to be under water, but the lower part of this River with Tensaw and Black River we are informed are all under water. We are at least two weeks behind with our crops of last year; so you may judge

what our prospects are for a crop; but our Lands are high and there is no danger of us losing all.

Yours respectfully, J. H. STEVENS.

RENOVATION OF WORN OUT LANDS.

We copy with great pleasure the following excellent paper from the pen of *H. P. Burgwynn*, Esq. of Northampton County, North Carolina, from the May No. of the Southern Cultivator, in which paper it has been published, in anticipation of the "Patent Office Report," for which it was written. We agree with the enlightened editor of the Cultivator, that if the "Report" contained nothing else than the essay in question, the money which will be expended in printing it, will be profitably laid out. What Mr. B. states, is not theory, which may or may not be true, *but are the results of his own practice and experience*, and therefore, implicitly to be relied upon.

In reading Mr. B's. excellent communication, we regret that lime and marl were not available in his district, as either, if used in connection with his pea-leys, would render his soil infinitely more productive. It is possible, however, that the stiff clays which underlay the lands of his neighborhood, and which are brought to the surface by his deep ploughing, contain notable portions of lime, potash, and salts of iron in various stages of oxidation, and may thus afford healthful supplies of the two first named substances; but even in that case, benefit would result from the applications of lime in the quantity so properly suggested by the discriminating mimd of Mr. B.,—or. even less quantities—"A quantity of lime," says Mr. *Puvis*, which does not exceed the thousandth part of the tilled surface layer of the soil, a like proportion of drawn ashes, or a two-hundredth part, or even less of marl, are sufficient to modify the nature, change the products, and increase by one-half the crops of a soil destitute of the calcareous principle." In another part of his valuable essay on the properties and modes of applyiug lime, he speaks most approvingly of the practice of the farmers of *La Sarthe*, France, who apply every third year, 11½ bushels per acre, in compost made of one part lime, and seven or eight parts good mould or earth.

In those districts of country where both lime and marl are to be had, but where the soil has been exhausted by improvident culture, by adopting the deep tilth and pea-ley system of Mr. B., and by liming or marling, the proprietors of such lands, will greatly add to their productive capacities.

We invite your attention to the following:

IMPROVEMENT OF WORN OUT LANDS BY THE USE OF PEAS AND CLOVER.

BY H. K. BURGWYNN, ESQ., OF JACKSON, NORTHAMPTON COUNTY, N. C.

Having heard from various reliable sources of the great success of Mr. BURGWYNN in renovating worn-out lands, in North Carolina, we were particularly anxious to obtain, from his own pen, an account of his practice in this important matter, for the Agricultural part of the Patent Office Report. At our request, Mr. B. sent the following able and instructive essay, which we take the liberty to publish in the CULTIVATOR, simultaneously with its going through the press at Washington:

There are large bodies of land lying in Eastern and Middle Virginia and North Carolina, which have been so much reduced by continued cropping, planting tobacco, cotton, and sowing oats, as no longer to pay the cost of cultivation, and are "turned out as waste lands." These really still possess a good share of fertility, and, by a very moderate expenditure of labor, and attention to common sense principles of agriculture, may be reclaimed, and have their productiveness increased from 100 to 150 per cent. They can be made truly valuable; and I do not hesitate to say, as the result of my experience, that they will give a greater profit in the course of five years' cultivation than can be derived from any except our rich river lands.

This is the method I have adopted, and by which I have increased the products of such lands from 1½ to 2 barrels of corn to 4 barrels per acre. The increase of wheat is proportionably greater than that in corn. My system of culture is substantially as follows:

If the "broom straw," in which these waste lands always grow up, retains any sap, by which, when turned under, fermentation will ensue, and cause the straw to rot, let the land, *as it is*, be plowed with the largest size plow, drawn by three or four horses, running as deeply as possible—say, not less than ten inches—and turning everything under. If the straw has no sap, it will not rot in a year: and in that case, burn it off, and plow as before. If possible, follow each plow with a subsoil plow, and go 6 or 8 inches deeper. This will make the stiff clay, which almost everywhere underlies our land, more open to the genial influences of the sun and air, and enable it to get rid of the surplus water of winter, and heavy rains in other periods of the year.

About the middle of June, following, when the weeds are about half grown, and before they have formed their seeds, sow the land broadcast at the rate of a bushel per acre, of any of the numerous varieties of peas among us, except the "blackeyed," which, having very little vine, affords little shade. In all cases, I prefer those which have the most vine, and ripen earliest. When the land has much of weeds or grass upon it, turn under the peas with any kind of plow, running not over three inches deep. If the land is bare of weeds, I prefer covering the peas with a large, heavy harrow, running both ways—first lengthwise, and then across the beds. As it is important to give the peas a start over the weeds and grass, I soak them six hours in water, and rub them in plaster of Paris; and, when they begin to leaf and branch, say, when 12 inches high, I sow plaster at the rate of a bushel per acre. This stimulates their growth, and they overpower the weeds and grass.

When about half the peas are ripe—not "half ripe"—hogs should be turned in to trample and cut up the vines, otherwise it is extremely difficult to turn them under. So soon as this can be done, the hogs should be taken off, for the peas are useful for shading the land from the summer's sun—a most important matter in all improvement—and giving to the thin soil a large mass of vine-leaves and other vegetable substances. From experience in the use of both, I think peas not inferior to clover (to which family, indeed, it belongs,) as a specific manure for wheat.

After this mass of vine has been turned under, you have a "pea ley," over which sow a bushel and a half of wheat per acre, and six quarts of clover seed. Harrow both in thoroughly, and let the work be finished by the middle of October. The return will, of course, depend somewhat on the quality of

the "old field;" but I venture to affirm, that it will amply repay all labor and outlay, and astonish by the great result apparently from so trivial a cause.

I am familiar with the great increase of crops from the use of lime and clover, and I do not mean to compare the two methods of renovating land as equal; but, where *lime* is not to be had, there is no application that can compare for a moment, on well drained land, (if it need draining) with plaster, peas and deep tillage. No gold mine is so valuable as a good marl pit. I am, however confining myself to interior districts, where neither lime nor marl can be had.

After the wheat comes off in June following, the clover, if sown early in October, will have grown so as to shade the land pretty well, even on the waste lands I speak of. It should not be grazed the first year, at all; in the February after, top-dress it with all the manure to be had, not forgetting to apply all the *old ashes* within reach. This time of the year, (winter) is best for applying manure in our country, where the hot sun acts so injuriously on a bare surface. The roots of the young clover being protected from hard frosts and sudden changes, by the manure, it shoots forward with the earliest warmth of spring, and smothers all weeds.—When weeds mature their seeds, they draw upon the fertility of land equal to most crops. Clover gives a crop equal to any other, and is all returned to the land in droppings of the stock while grazing upon it. As proof of its profit, for three years I have never fed my working horses on grain or fodder, from the middle of May till the clover fails. They are turned, on the clover-field after the day's work is over, and taken up in the morning in good condition for service. I have never lost one by this management: in fact, they improve from the time they are thus treated, and work better.

After the clover has been on the land for two summers, during which period it has dropped three crops of leaves and stocks, and thereby greatly improved the land, either turn it under as before, in September or October, for wheat, or later in the fall for corn the ensuing year. In the former case, you will find your land as thickly set as before with volunteer clover, which ought to remain as a pasture for the summer, after the second crop of wheat comes off. If corn instead of wheat, be grown, sow peas broadcast among the corn at the last plowing, soaking the seed and rolling them in plaster as before. After the corn crop, do not suffer the land to "lie out." No error can be more opposed to good farming, than that which assumes that land is improved by "lying out" and permitting a crop of weeds to mature upon it. If we had duly reflected, this error would long since have been apparent, in the continued quantity of thousands of acres lying waste around us, *not a whit improved by "lying out."* After the soil has once been brought up by peas, subsoiling, or deep plowing and clover—all within reach of the farmer even in the interior—it will not again relapse, unless the former barbarous and senseless practice of exhaustion and negligence be again adopted. If lime can be had, even at a cost of 20 cents a bushel, I would in all cases spread it on the land, after the first crop of peas had been turned under, to the amount of fifteen or twenty bushels per acre. This quantity will greatly benefit the land, and enable the owner shortly to repeat the application of a like quantity.

NOTE, BY THE EDITOR.—If the Agricultural Report (of which one branch of Congress has ordered 100,000 copies to be printed, and the other will, doubtless, order half as many more,) contained no other information than the above paper, from an eminently practical man, on the improvement of "Worn out Lands," we should regard the money as well expended. A very large share of the $32,000,000 annually paid into the national Treasury, is drawn directly or indirectly from the soil. Hence its preservation and economical improvement, are the most important of our public interests.

WORK IN THE GARDEN.

That season of the year having arrived when *action* is indispensable to success, we shall proceed to call attention to such matters as we deem important to secure the object we have in view. And as those to whom we are addressing ourself, never neglect anything calculated to promote the comfort of those who may justly claim its performance at their hands, we, with the more pleasure, proceed in the discharge of our duty, knowing as we do, that our suggestions will fall upon the ears of those who are willing to listen, and who possess hearts that will respond with the more promptness, as what we ask to be done is for the benefit of their kind.

With this brief introduction, we shall proceed at once to point out what we deem necessary to be attended to in the course of the present month.

Cleaning of compartments.—See that all the beds where your early vegetables grew are cleaned off, the refuse given to the pigs or covered up in the manure heap, in order that all such ground may be in a condition to be at once prepared to receive such of your fall and winter vegetables that may be still unplanted.

Melons for Mangoes.—You should, during the first week or ten days of this month, prepare a bed and sow your melon seed for mangoes. Manure the ground, give it a spading and raking, then mark it out into squares of 6 feet each way; at every angle dig a hole 12 by 18 inches, into which put a spadeful of rich manure, cover with about 4 inches of the earth excavated, mix that with the dung, then spade in the residue of the earth, and draw on more so as to make a hill a few inches above the level of the bed, about 12 inches wide at top, then plant your melon seed 2 inches apart, 8 or 9 in number, and cover them 1 inch deep.

When the plants first come up, dust them with soot, and continue to do so each morning, early, until they get into the rough leaf; then thin them out so as to stand 3 in a hill. In thinning, consult the position and strength of the plants. In the after culture, you must keep the vines clean, and occasionally increase the hill, drawing earth around the stem each time as far up as the seed leaves. When the plants have thrown out their runners to some distance, pinch off the extreme points, so as to stop their further running, to strengthen the plants, and accelerate their fruiting.

Cucumbers for Pickles.—Prepare a bed as directed for melons, and plant cucumbers for pickling: their management is also the same.

Planting out Cabbages, Savoys, &c.—You should avail yourself of the first wet season, to set out your cabbage plants of all kinds, as also your borecole and broccoli plants. After setting them out, be careful to have them watered every afternoon late, just before sunset, until they have taken firm root.

In withdrawing them from the seed beds, we would advise you to have a mixture, reduced by water to the consistency of cream, comprised of loam,

6 parts, soot 1 part, and flour of Sulphur, 1 part, ready in a piggin, noggin, or basin, in which the plants should be placed up to the leaves. This serves the double purpose of giving the plants an early start and of repelling their enemies the worms.

Endives.—Set out your Endive plants, and sow seed for late crops, two or three times during this month. The bed in which your endive plants may be set out, should be made rich with manure, well dug and well raked. The plants should be set a foot apart each way; and be treated as advised for cabbages.

Dwarf Beans.—Any time this month you may plant dwarf beans. The beans before being planted should be soaked five or six hours. When planted, water the drills and continue to do so every day or two until they come up, in order that their germinating powers may not be impaired by drought.

Cauliflowers.—Embrace the first wet season to set out your cauliflower plants, for use in winter; manage them as recommended for cabbage plants, taking care at all times that they do not suffer from drought, and are worked sufficiently often to keep the surrounding earth open, and free from weeds and grass.

Small Salading.—Every week throughout this month, sow seeds of all kinds of small salading, so as to ensure continuous supplies of these pleasant and healthful table vegetables.

Carrots.—If you have not already sown as many carrots as you think you will need through the next winter and spring, you may still drill in a few rows, in an open, deep, loamy bed. The seed must be rubbed between your hands, mixed with dry sand, then soak them for 6 or 8 hours previous to drilling them in. When drilled in, give the drills a soaking watering, and keep up a moist condition in the soil until the plants come up. When the plants are 2 or 3 inches high, thin them out so that they will stand about 5 or 6 inches apart in the drills, and be sure to keep them at all times, until laid by, with an open and clean soil. We recommend their being thinned out to the distance named above, in consequence of the lateness of the season requiring that their advantage of *space* should be greater than when earlier sown.

Celery.—Plant out your celery plants for a main crop, in the manner advised last month.

Turnips.—Any time between the twentieth of this month, and tenth of the next, you may sow your bed of turnips. Let your bed be well manured, spaded the full depth of the spade, thoroughly raked, then put on a compost comprised of six parts rotten cow dung, and two parts ashes; dig this in three or four inches, rake thoroughly, then sow your turnip seed, rake them in lightly, and roll the bed. When the plants come up, treat them as recommended for field culture, under the head of work on the farm.

Ruta Baga.—As this is an excellent root for spring use, you should sow a bed in your garden, their management you will find by reference as above given.

Lettuce.—Set out your plants for heading, water them immediately afterwards, and continue to do so until they shall have taken root, keep them clean, and give them occasional waterings in dry weather, and you cannot fail to have fine crisp heads. Sow more seed in the beginning, middle, and last of the month to keep up your supply.

Spinach.—Towards the last of the month, sow a bed of spinach for autumn use.

Radishes.—Sow radishes at intervals of a week throughout the entire month.

Cabbage.—If you wish a supply of young greens during autumn, sow some seed of the *Early York*, *Battersea* and *Sugarloaf kinds*. As soon as the plants are large enough, transplant them.

Seeds.—As your various seed plants mature their seeds, pull them up, and spread them in some airy room to dry, taking care to turn them over every few days, so that the drying may be equal on all sides, and when dry, hang them up in paper or cotton bags.

Leeks.—Plant out your leek plants.

Herbs.—Gather your herbs for drying.

Sage, Thyme, Lavender, Hyssop, winter Savory, and most herbs of the kind, may still be propagated from slips of this year's growth. Care must, however be observed at the time of setting them out to give the slips a free watering, and to water them, afterwards, every other evening, about sunset, until they take root and give evidence of growing.

Peas.—Towards the last of the month, drill in a few rows of the earlier kind of peas. Soak the seed the overnight previous to planting, and give the drills a good watering at the time; keep the ground moist after they come up, and the bed clean, and in September you may expect a tolerable supply of peas.

Egg-plants, tomatoes, and red pepper plants may still be set out.

Savoy Cabbages.—The seed of this delicious vegetable may be sown the first week of this month, for a late winter crop.

General attention in the Garden.—Let it be your daily practice to examine every part of your garden, and wherever you find grass or weeds growing, direct your gardener to pull or dig them up, collect them in a pile and burn them, in order that their seed may not, by reproduction, annoy you next year. See that your beds, which may have grown early vegetables are cleaned of the refuse and offal matters upon them, have all such matters burnt or carried to your manure piles and covered up, or given to the hogs in their styes. Make it a *rule*, never to suffer weeds or grass to go to seed in your garden, and you may rest assured that such attentions now, will save your hands from much annoyance in future years. Act for the future, as well as for the present, and you cannot fail to reap a rich reward. Make your gardener know, that no growing plants shall suffer under your notice from want of cleanliness, and that in periods of drought, his *waterings must be frequent and copious*, and you cannot fail to have a luxuriant garden, and be rewarded with abundance of choice and healthful vegetables.

Inspect all your growing crops daily, and exact it as a duty from your gardener, to let none suffer for the want of proper working at the right time:—every bed must, at all times, be kept perfectly clean, the earth open, and, whatever may require it, be seasonably hilled up.

Having thus concluded our general hints, we design addressing a few words to those of our friends who are included within the States who attend the annual Fair at Baltimore. *It is desired by the Society that the exhibition of Fruits, Vegetables, Flowers, preserves, pickles, conserves, the products of the dairy, articles of Embroidery, articles of domestic manufacture, whether for the table, or for personal wear, poultry of all kinds, and every other article that comes within the province and management of the ladies of the several homesteads,* shall be such as will reflect credit alike upon the fair contributors, upon the institution itself, as well as upon the several States whence those con-

tributions may come. Such a struggle for superiority and excellence—such rivalry—has so much of the generosity which belongs to elevated ambition about it, as to render it eminently worthy of the competition of woman,—and we sincerely hope that each and all of our lady readers within the prescribed limits, will feel themselves appealed to by the loftiest promptings of patriotism, to enter the lists with the firm resolve to deserve and win the meed of praise, and carry back to their homes trophies more glorious than would be civic crowns in other lands, where liberty dwells not. To the *ladies*, then in a spirit of deference and appreciation, we commit the fate of this portion of the Maryland State Agricultural Society's Fair and Exhibition, and feel assured that it could not have been committed to better hands nor purer hearts.

THE CROPS.—The Harvest is commenced, and the indications are, that a full crop of wheat will be secured in the middle states.—We hear from various quarters, complaints of injury from the fly, and also in some localities from the rust, but these, we hope are of but limited extent. The accounts from the West are contradictory—the drought has been excessive, and fears, (so says the Ohio State Journal of the 11th ult.,) were felt that the wheat crop of Ohio and Michigan will be cut off. Flour was selling at Detroit at $6, with an upward tendency, and Hay at Cleveland at $20 per ton. We conversed a few weeks since, with a very intelligent gentleman of St. Louis, who had just reached this state from Missouri, who assured us that the same complaint in regard to the drought was found to exist in his own and other western states; that flour was selling at almost unprecedented high prices. A letter dated Warren, O., June 3, published in the Columbus Journal, says:—"Farmers are now apprehensive of a repetition of the scenes of 1845 in regard to feed, and some are selling their cattle at a sacrifice, while others are sowing corn as a substitute for hay. I have just returned from Cleveland, and vegetation there and on the lake shore looks even worse than here." Accounts from other sections of the West, are more favorable.

The Tobacco crop it is universally admitted is going to be a short one—our advices from every quarter, seem to confirm this. From Kentucky, Tennessee, North Carolina and Virginia, as well as Ohio and our own state, are all of the same tenor, that the unfavorable season will have prevented anything like the usual number of plants being put out.

The Corn, every where is backward, but appears to be in a healthy state—if the season is favorable, it may yield a good crop, but the chances are against it.

The Hay crop will be unusually good.

OYSTER SHELLS.—A correspondent wants to know if any experiments have been made in the use of *ground Oyster Shells*, as a manure?—what is its agricultural value in that state?—and also its relative value as compared with bone dust? We shall be thankful for any information on these subjects.

SHEEP SHEARING.—The following are the weights of fleeces, we are informed, obtained from some of the flock of Col. WARE, of Clarke county, at his late shearing. They were washed on the back, and rated —8, 9, 9½, 10, 11, 11½, 12, 13, 13½, 16, 18½ lbs. The last uncommon fleece was taken from the buck, which at the shearing last year yielded 18½ pounds.—*Winchester Virginian.*

Our friend "C." at Washington, is informed, that he can apply his unleached ashes to his guanoed wheat land, as soon after his wheat shall be cut as may suit his convenience, in any quantity from 50 to 100 bushels to the acre; it will prove eminently serviceable to his young clover.

"Agricola" is informed, that the red soil he describes, cannot fail to be highly benefitted by lime: it was the lime in the old mortar that acted so favorably. We should apply 50 bushels per acre, and would not care as to time of application. Lime or ashes would act equally well; we know of no other permanant manure, except bone-dust, that would answer: subsoiling would add 25 per cent. to the productive value of his land.

Our correspondent from Chesterfield Co. Va. is more likely indebted to the extreme poverty of his land, of which he speaks, for his disappointment in obtaining but 8 or 10 bushels wheat to the acre, from the 200 lbs. of guano applied, than to his depth of ploughing; though, if several inches of subsoil were for the first time turned up last fall, and used without the benefit of frost and lime, he may look to that circumstance for the cause.

Luxuriant Wheat.—our friend *J. Edwin Coad, Esq.* of St. Mary's Co. has sent us two samples of wheat of this year's growth, asking us for the name of it. By comparing the tallest sample with a sample sent us last year, we are induced to believe it to be the "China Wheat." The largest of the samples, measures none less than 6 feet 6 inches, while some reach 6 feet 9 inches in length, the stalks near the roots being as large in circumference as a goose quill; the heads are of good size, and boarded. The other sample is remarkable for the largeness of its head, and is also bearded, but we are unable to name it.

Both, however, manifest great luxuriance, and are doubtless fine varieties. They are the product of field culture, and give evidence that their enlightened grower has been attentive in providing his soil with the right *kind* of food, and that he has not sparingly dealt it out.

We have also received some stalks of the same variety of wheat, raised on the farm of Mrs. Capt. Dungan, near this city—they are nearly as tall as Mr. Coad's. By the by, this *China* wheat, is the same as that raised by our friend *Register*, and to which his name was given in some notice of it in our last volume.

FREIGHT ON GUANO.—In our last we stated that the Baltimore and Ohio Rail Road Company were about to reduce their charges for freight on manures, to half their former rates—we should have said that that Company had *already* reduced their freight on manures to half their former rate, the reduction having taken effect on the first of April last.

While it gives us pleasure as an act of justice to that company, to make this correction, and to commend their example to other internal improvement companies, we think it not out of place in this connexion, to state, that this important reform has been brought about mainly through the persevering and well directed efforts of A. B. Davis, Esq. of Montgomery County, Md. We happen to know that for the last three years, he has omitted no opportunity to press this important subject, both upon the Canal and Rail Road Companies, and the farmers adjacent to those roads are largely indebted to him for the cheapened facilities for improvement they now enjoy.

Sheep Husbandry in Talbot Co.

To the Editor of the American Farmer—

The writer was present at the shearing of the fine flock of sheep owned by James N. Goldsborough, Esq. of Talbot, and was so struck by the healthy and thrifty appearance they presented, that he was induced to weigh some of them. It may interest your readers to know the result, which was as follows:

A three year old Oxfordshire Buck weighed	235lbs
His fleece, washed wool, weighed	7¼lbs
A yearing grade Lincoln Buck, weighed	171½lbs
His fleece washed wool weighed	8½lbs
A three year old New Leicester ewe	212½lbs
Her fleece washed	7½lbs
A three year old New Leicester Ewe	194½lbs
Her fleece washed	7½lbs

Mr. Goldsborough pays great attention to this description of stock, and the high condition of his flock exhibits the excellent judgment and farmer like management which rule all his agricultural operations. In noticing the excellence of these sheep it is the purpose of the writer to draw the attention of breeders of sheep to a source from which they may obtain the very best of stock, where no taint of disease or unthriftiness has shown itself. D.

FLORAL DEPARTMENT, FOR JUNE.

Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

All the necessary arrangements for planting and bedding out the different kinds of plants, if not already attended to, should not be delayed, as the season is approaching when we may expect a fine bloom of the different Annuals, Perennials, and all the summer flowering plants, interspersed so as to give the best possible effect when in bloom. Dahlias should be planted at once, if not previously done, so that they may be able to get strong for a late bloom; keep them neatly tied to supports, and protect them from being broken by the winds, and leave but one stem for flowering, as preferable to two, thus giving the bloom a better chance of being finer.

Lemons and Oranges with many other greenhouse plants, may be planted in the borders for the summer; it invigorates them, besides it is much less trouble than having to water them continually; and if carefully taken up in the fall and repotted with good fresh loam, will give them a healthy appearance through the winter.

Tulips, Hyacinths, and such bulbs as have done flowering, may be taken up, and the roots kept in dry sand in a cool shady place (*from moisture*) till the time of planting in the fall; or if not taken up, cut the taps within the ground, and stir the earth an inch or two deep, and sow annual flower seeds, as Mignonette, Portulacca, or any dwarf growing varieties which do well in this way, and don't injure the bulbs.

Annual flower seeds that are too thick, may be transplanted—if the plants are large enough, take them up with good roots, and give plenty of water after planting, which ensures success, and if required, shade for a few days.

Cyclamens, Ixias, Babianas, and similar varieties of green-house flowering bulbs, should be kept dry, and the pots turned on the side to prevent getting too moist; and the different kinds of seed may be sown of the same, if a larger stock is wanted, and it is likely new varieties may be obtained.

Achemenes, Gloxinias, and such will be coming in bloom, and if properly treated, will bloom most of the summer—there is nothing more beautiful—they like a rather shady, moist situation.

Budding roses may be performed, and cuttings taken of such as are required to keep up the stock; repot and plant out all that are large enough, and give them such soil as has been already recommended.

Camelliasinarch, if the wood is ripe enough, keep them clean, and frequently syringe over the tops; this gives them a fine healthy appearance.

Geraniums will be in fine bloom, and need plenty of water and shade from the mid-day sun.

All green-house plants will require proper attention. Layer such as cannot be struck from cuttings, which is a sure course of propagation.

METEOROLOGICAL TABLE,

From the 20th of May, to the 21st of June.

Kept at Schellman Hall, near Sykesville, Carroll County, Md.

Taken at 6 o'clock, a. m., 3 o'clock, noon, and at 6 o'clock.

	Wind.			Temperature			Remarks.
21	w	s	s	45	60	59	Clear
22	s	s	s	43	78	60	Clear
23	sw	nw	se	54	66	63	Clear
24	se	se	s	42	56	5	Clear, cloudy, rain
25	se	e	e	49	53	52	Rain 1 in. cloudy, rain
26	se	w	sw	50	63	50	Rain 1 1-2 in. cloudy
27	sw	nw	w	50	75	65	Clear
28	sw	w	s	58	85	67	Clear
29	se	s	sw	55	71	71	Fog, cloudy, rain
30	sw	s	s	61	76	71	Clear
31	e	s	se	59	61	51	Cloudy, shower, cloudy
1	s	se	s	50	61	57	Clear
2	s	e	s	54	70	65	Clear
3	s	s	sw	60	80	70	Clear
4	s	sw	sw	60	85	75	Clear
5	s	s	s	60	85	75	Clear
6	s	e	s	60	85	77	Clear
7	s	se	se	97	85	75	Clear
8	se	sw	w	65	80	65	Gust 1-2. gust 1-2 [night
9	e	sw	sw	67	81	77	Clear, fine breeze, gust at
10	ne	w	w	65	76	65	Cloudy, clear
11	ne	n	n	55	71	51	Clear
12	w	w	w	67	80	60	Clear
13	sw	se	s	60	84	75	Clear
14	s	ne	sw	64	88	75	Clear, shower
15	s	e	nw	67	86	68	Clear heavy gust
16	ne	e	e	65	73	69	Rain 1 5-8 in, clear
17	e	e	se	58	73	65	Cloudy, clear
18	se	se	se	68	80	68	Cloudy clear,
19	se	s	s	70	86	78	Clear, fine breeze
20	se	s	s	58	87	85	Clear, fine breeze

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Rported for the American Farmer by J. W & E. Reynolds,

During the month of June, we have noticed no change in the prices of Md. Tobacco, compared with the prices obtained in the month preceding, and not as much was received or sold during the month of June as there was in May; and the planters being busily engaged preparing for raising another crop, and for harvesting, is we presume the cause of the receipts for the last month being less than the preceding one. As the prospect for a full crop this year is very gloomy, we do not anticipate a decline in the article; nor do we expect any advance unless it shall be ascertained that the crops to grow this year will be short.

Grain.—Red wheat $1.10 to $1.20, and $1.15 to $1.30 for white. Yellow corn 58 to 63cts—white do 57 to 60cts. Oats 40 to 44cts.

Cattle-Beef, ranged from $2.50 a $4 on the hoof, equal to $5½ a $6.75 net, and averaging $3.12 gross, supply large. Hogs, supply light, and market active, at $5.00 a $5.50. Coffee, Rio, 9½ a 10c. Cotton has not been affected by the late advices from England, which indicated a slight decline in prices.

E. WHITMAN'S
Agricultural Warehouse

AND

SEED STORE,

No. 55 light street, Baltimore,

WILL contain, this season, the largest stock of Improved AGRICULTURAL IMPLEMENTS ever offered for sale in this country, amongst which will be found

100 Whitman's Superior Wrought Iron Railway HORSE POWERS, which received the *first premium* at the last Fair of the *Maryland Agricultural Society.*

100 LEVER or SWEEP POWERS, among which will be found all the latest improvements; also, the Eddy or Taplin Power, which is portable, simple and durable, consisting of one wheel only.

200 Whitman's THRESHERS, which received the *first premium*, in Baltimore, in 1849. The cylinder of this Thresher, being all in one piece of iron, will last **100 YEARS**, in constant use. A great improvement has recently been made in the teeth or spikes, which makes it *the most perfect machine* now in use.

100 other THRESHERS, comprising various kinds and improvements.

7,000 PLOUGHS, consisting of every kind now in use.

500 Premium Cultivators, $4, $4½, $5 and $6.

500 " Grain Cradles, of approved kinds.

50 " Corn Planters; price, $20.

100 " Seed Sowers; price, 10.

Grant's celebrated Fan Mills; prices from $25 to $40.

Bamborough's " " " $28, 30, $32 and $34.

Strong's, Rice's, Clinton, Boston and other Fans.

Improved Harrows, Straw Cutters, Corn Shellers, Corn and Cob Crushers, Fodder Cutters and Grinders, Ox Yokes, Dirt Scrapers, Churns, Scythes and Sneaths, Wheelbarrows, Root Pullers, Shovels, Spades, Hoes, Forks, Buckets, &c. &c.

Also, a general assortment of

FIELD AND GARDEN SEEDS,

Which are warranted to be fresh and genuine.

apl E. WHITMAN, JR.

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100 DOZEN HAND & HORSE RAKES, for sale by E. WHITMAN, Jr.

PRACTICE & THEORY.

THE SUBSCRIBER having a thorough practical knowledge of the application of Machinery for Agricultural purposes, is therefore enabled to offer his fellow farmers, THRASHING MACHINES of various sizes, constructed and built at his own shops, which are unequalled for mechanical principle, durability and cheapness. I am desirous that my Machines should go at once into farmers' hands at the cheapest possible rates, request therefore to know the amount of work wanted per day and the machine and price will be made to suit. Machines delivered in Baltimore, or on the Balt. & Ohio Rail-road. Address, JAS. C. ATLEE.

je 4t New Windsor, Carroll Co. Md.

IRON WIRE.

500 BUNDLES IRON WIRE, including all numbers, suitable for Fencing, for sale by E. L. PARKER & CO.

mar 1-6t Cor. Calvert and Lombard streets.

PLOWS AND CULTIVATING IMPLEMENTS.

R. SINCLAIR, JR. & CO.

HAVE manufactured, and have for sale, an extensive assortment of Cultivating and Flushing PLOWS, Corn and Drag HARROWS, CULTIVATORS, ROLLERS, &c.

Also—We particularly recommend to the notice of Planters the Echelon or Gang Plow, made to cast 2, 3, 4 or 5 furrows, and admirably adapted for seeding, cultivation or shallow plowing. The Plows casting two furrows are made with large and small mould boards, and suitable for cultivation or ordinary plowing. R. SINCLAIR, JR. & CO.

apl 52 Light street, Baltimore.

A. G. MOTT,
AGRICULTURAL IMPLEMENT MANUFACTURER,

No. 38 *Eutaw street*, near the Belair Market, Baltimore. Plows, Cultivators, Harrows, Wheat Fans, Straw Cutters, Grain Cradles, and all of the best and most approved Agricultural Implements in use.

☞ AGENT for the celebrated N. York Wiley and Empire Plow Castings. mar1

C. H. DRURY, *Hollingsworth street corner of Pratt—Head of the Basin*—having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Bench Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn shellers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, of when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel

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AGRICULTURAL ESTABLISHMENT.

The subscriber, manufacturer of *AGRICULTURAL MACHINES* AND IMPLEMENTS, And dealer in SEEDS, &c., offers for sale,

HORSE POWERS, for from 2 to 8 horses.

THRESHERS, of various sizes and superior construction.

WHEAT FANS, improved pattern 1850, warranted to clean equal to any other fan at one operation.

PLOUGHS, of all sizes and various patterns.

Parker's original Iron Cylinder CORN SHELLER, known by some as the Virginia Sheller; price for horse power, $27; hand power, $24.

Smith's Patent STRAW CUTTER; price, $10; one of which was exhibited at the last Maryland State Fair, and gave very general satisfaction. This cutter can be easily transported to any part of the United States, occupying, when packed, a space of only 1 foot by 4.

Also, Harrows, Cultivators, Axes, Scythes, Shovels, Spades, &c. ☞ Orders from any part of the U. States punctually attended to.

Manufactory on Water st. Warehouse, No. 36 Main street.

J. K. PARKER.

Richmond, April 1, 1850. 6t

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 25 Hollingsworth-street, near Pratt.

tf **FELL & ROBINSON**, City Block.

WATER RAMS.—The undersigned will put up Water Rams on the farms of gentlemen in the vicinity of Baltimore, and guarantee their performance. Rams of his construction, can be seen on the farms of Messrs. Wm. Jessop, Wm. Tagart, John Merryman, N. R. Merryman, E. P. Horn, Joshua Cockey, Dr. Tyson, Rider, and others, of Baltimre County, Md.; all of whom can testify to the correctness of the principle, and the value of the machine. All communications, or information upon the subject, will be promptly attended to.

JAMES COOK,
Chatham Post Office, Chester County, Pa.

☞Further particulars can be obtained of the Editor of the American Farmer, where orders may be left. jan1

DUVALL & IGLEHART,
GROCERS AND COMMISSION MERCHANTS,
No. 78 LIGHT STREET WHARF,

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every *article* in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. *They will also pay particular attention to the sale of all kinds of produce.*

Baltimore, October 1, 1849.

THE TROTTING STALLION KNICKERBOCKER—will stand during the season on Monday and Tuesday of each week at his owner's farm, in Harford County, between Abingdon and Belair; and on Thursday and Friday at Towsontown, Baltimore County. This horse was sired by CanadaChief and is out of a mare of the Mambrino Stock. He is four years old, 15 hands three inches high, of a rich brown color, and possesses remarkable speed for his age. m 1

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.——*GEORGE PAGE,* Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $85 to $200, and each simple, strong and powerful. His *Horse Power & Thrashing Machine,* he is prepared to supply at the low price of $125 complete; the Thrashing Machines without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planter, Portable Tobacco Press; Portable Grist Mills complete, $12.

NEW OXFORDSHIRE AND BAKEWELL AND SOUTHDOWN LAMBS.

The subscriber will have ready for delivery in August and September next, a number of BUCK LAMBS full bred new Oxfordshire or Cotswold stock, purchased from Mr. Reybold, of Delaware. Price, $15 to $20.

Also, Bucks, a cross of the New Oxfordshire on the Southdown and Leicester. Price, $10. Apply to S. Sands, office of the American Farmer, or to WM. JESSUP,
je 1 3t Cockeysville, Balto. Co., Md.

SOUTH DOWN SHEEP FOR SALE.

A very superior thorough bred buck, descended from Mr. Ellman's stock. He is very large, 3 years old, in fine condition, and has clipped 8 lbs. of wool of excellent quality—having bred to him for two seasons, he is therefore offered for sale. Also a yearling buck sired by the above. Forty five select South Down ewes having been bred to the above described buck, the subscriber can dispose of a number of ewes and buck lambs, and a few breeding ewes.

M. TILGHMAN GOLDSBOROUGH.
Easton, Talbot Co: Md. 10th May. 1850. je 1 4t

SOUTH DOWN RAMS.

The subscriber has for sale, deliverable on the first of August, Ten South Down Ram Lambs of the purest and highest bred stock in the country, having been carefully bred from original importations and from premium animals. Price twenty five dollars each Address
je 1 3t WILLIAM B. DOBBIN, Baltimore.

BONE-DUST AND POUDRETTE ESTABLISHMENT.
On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of *POUDRETTE,* and is prepared to supply any orders for the same—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His *BONE-DUST* weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 55 cents per bushel. Poudrette, $1.12 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 90 cents per bushel.

☞Any orders left at the factory, or with Mr. S. SANDS, editor of the "*Farmer,*" at the State Agricultural Society's Rooms, will receive immediate attention. Terms, cash.

GROUND BONE.

The subscribers have commenced grinding, and will keep constantly on hand, Ground Bone of superior quality, being all fresh, gathered daily, from the various Market and Slaughter houses of this city—(an exclusive privilege of our own,) and warranted free from Chemical, or any other process, or impurity, which has a tendency to diminish their Fertilizing qualities. Orders left with Messrs Geo. C. Collins & Denson, 83 Light-st Wharf, or at the Factory, opposite the outer Depot of the Baltimore and Ohio Rail Road, will meet with prompt attention. Price fifty cents per Bushel.

P. S. Samples at the office of the American Farmer.

COLLINS & BULLOCK,
Glue and Neats-Foot Oil Manufacturers,
je 4t * Columbia street.

GREAT SALE OF SHORTHORN CATTLE.—The subscriber will offer for sale, without reserve, at public auction, on Thursday, the 29th day of August next at 1 o'clock, P. M., on the farm of J. P. Sheafe, Esq., at New Hamburg, Duchess Co., New York, about 35 head of Shorthorn cattle, including cows, heifers, and calves.

This herd was mostly bred by Mr. Sheafe, and I do not hesitate to say, that I think it *one of the very best* in the United States; and I have seen and particularly examined nearly all of them. Great attention was paid in the commencement of this herd, to the milking properties of the animals forming it; and this together with fine points and good growth and constitution, have been steadily kept in view in its breeding. There is but one cow in the herd which gives less than 20 quarts per day, in the best of the milking season, while one has given over 29 quarts per day and made 15 lbs. 3oz. of butter per week, and two others have given respectively, 31 and 36 quarts per day. Their color is of the most fashionable and desirable kind—red, red-and-white and a rich strawberry roan—only one white cow in the lot. They are of good size and fine style, and all in calf to the superb imported bull Exeter, who will also be offered for sale at the same time.

Pedigree of Exeter.—Exeter is of the Princess tribe of Shorthorns—was calved in June 1848, and bred by Mr. John Stephenson, of Wolviston, Durham, England. He was got by Napier, (6,238,)—out of Jessamine, by Commodore (3,452)—Flora, by Belvidere, (1,706)—Jessey, by Belvidere, (1,706,)—Cherry by Waterloo, (2,816,) &c. See English Herd Book, Vol. V., for the full pedigree.

Exeter was selected for Mr. Sheafe, by a first rate judge of Shorthorn, stock, and was considered one of the *very best bulls* in England. Quite a high price was paid for him; and it is believed that his superior, if even his equal, has never before been imported into this country. He carries an enormous brisket for his age, and his style, handling, and quality are of the finest kind. His color is mostly a beautiful yellow-red, which is a bright-red with a fine golden or saffron undertinge, arising from a rich yellow skin. He is the *only bull of this peculiarly desirable red,* ever imported into America. Calves got by him, out of this herd of cows, will fetch a high price the moment they are dropped.

Mr. Stephenson, the breeder of Exeter, now stands at the head of his class in England, and his stock is of the highest repute. It is entirely of the Princess tribe, and traces its pedigrees without any alloy or Galloway blood, back to pure Shorthorns, for upwards of *two hundred years*; a matter of no small consideration to those who wish a *superior fresh cross.*

Catalogues of the above stock, with pedigrees in full, are now ready for distribution.

Southdown Sheep.—A choice flock of this superior breed of mutton sheep will be sold on the same day as above.

Suffolk Swine.—One boar and several breeding sows and pigs, of this fine breed of swine.

Working Oxen.—A handsome pair of red working oxen.

je 1 3t A. B. ALLEN, 189 Water st., New York.

FOR SALE.

20 BUCK LAMBS of the Cotswold or New Oxfordshire breed, deliverable in Baltimore, after the 1st of August, proxo. The subscriber has received the first premium for the best pen of Lambs at each exhibition of the Maryland State Agricultural Society. The original stock was procured from the celebrated flock of Clayton B. Reybold, Esq. of Delaware. Price, $15 to $20. according to choice. For further particulars enquire of the Editor of the *American Farmer,* or HENRY CARROLL,
m 1 3t * Westerman's Mills P. O. Balt. Co.

SHEW & MAKRS'
DAGUERRIAN GALLERY,
117 *Baltimore street.*

HIGHEST PREMIUM AWARDED at the late *Fair of the Maryland Institute,* for the BEST DAGUERREOTYPES exhibited.

☞ Likenesses accurately taken in any weather, for Lockets, Signet Rings, &c., and satisfaction guaranteed in all cases. Paintings and Engravings correctly copied. jan1

☞ *Catalogues descriptive of the Implements and Machinery of Messrs. Sinclair, jr. & Co. and Geo. Page, as presented in our Pictorial Sheet, can be had by addressing, post paid, the manufacturers. Mr. E. Whitman, jr. in a week or two, will also have a very extensive descriptive catalogue, which will be furnished in like manner to those wishing it.*

North Western Agricultural Repository.

HAMBLETON & DIDIER,

No. 97 NORTH PACA STREET, BALTIMORE.

FANS!—FANS!!—FANS!!!

100 FANS now on hand of our own manufacture, which we warrant of the best materials and workmanship. It will be remembered by the farmers that this is the fan which took the first premium over a great variety at the last Cattle Show held at Easton. It is so constructed as not only to cast out the filth usually seperated by fans, but also to rid the grain of all the cockle, cheat, &c.; at the same time avoiding that, which has been so justly urged as an objection to other fans appertaining to do the same work, viz. wasting of good grain among the tailing. These Fans in addition to the above mentioned advantages will chaff faster than any other fan ever offered to the public. Persons desirous of obtaining a very superior article for a small price, are invited to call and examine before purchasing elsewhere.

HAMBLETON & DIDIER.

Successors to Maxfield, Mott & Co., No. 97 North Paca street, Baltimore. jy1

HORSE POWERS.

As the season is fast approaching, when this great labor saving machine, will be called into general use, we deem it but justice to ourselves to say to the farming community, that we have now on hand, and are still manufacturing a machine superior in both its scientific and mechanical principles, to any ever heretofore offered to the public; it consists of a LEVER POWER, the gearing of which is of the most simple and durable character, and we have no hesitancy in saying that it is capable of doing more work with less power than any similar machine now in use; whilst its combination is of such a character, that it is almost an impossibility to put it out of order. By using the best materials and moderate prices, we hope to merit a share of the public patronage, with a continuation of the favors extended by our former friends.

HAMBLETON & DIDIER,
Successors to Maxfield, Mott & Co.
jy 1 No. 17 North Paca Street, Baltimore.

TAYLOR'S Patent Hames for sale by HAMBLETON & DIDIER, 79 Paca st., Balt.

THRESHING MACHINES.

WE would call the attention of Farmers to our stock of Threshing Machines now on hand, and to which we are daily making new additions, among which are to be found a Threshing Machine of late construction which we warrant equal if not superior to any in use. It will thresh faster than any other machine requiring the same amount of Power, whilst it does away with many of the object ons heretofore urged against this most useful of all Agricultural Implements; such as choking, cracking the grain, and the great liability to getting out of order, whilst its construction ensures strength and safety from any accident in case of the breaking of teeth, &c.

Also Cope's wrought Iron Thresher, being composed solely of wrought metal, both concave and cylinder. The cylinder is constructed of wrought iron bars, having the teeth riveted fast; these bars are bound fast to four round plates equally distant from each other, with wrought iron rings in such a manner that it would be impossible to remove the bars with any pressure that might come in contact with them whilst threshing, and is so open that stones or any obstructions accidentally falling in are permitted to pass without injury to the machine. jy1 HAMBLETON & DIDIER.

Rail-way, or Endless Chain Horse-powers.

WE have now on hand at manufacturers prices, COPE'S EXCELSIOR ENDLESS CHAIN-POWER, which we shall continue to keep during the season. This machine is built in the State of Pennsylvania, where every attention is given to strength, simplicity and durability. The work is done in the best manner and of the best material, it possesses many advantages over all similar machines in the peculiar construction of the wheels, the strength given to the axels by their diameter, being much greater than any other machine. Also, by the mode in which the wheels are raised at the head, being a solid plate, which will last for 50 years, without danger of getting out of order. With all these advantages, it is moved with the greatest facility, and warranted to thresh as much grain with as little power as any other similar machine offered to the public. HAMBLETON & DIDIER,
jy 1 No. 97 North Paca street.

HAVING just received a fresh invoice of superior Iron Braced GRAIN CRADLES, from one of the best manufacturers in the country, we are now prepaired to furnish all who may favor us with a call, a very superior article with the genuine English Waldron Blade, upon the most reasonable terms. HAMBLETON & DIDIER.
jy1 No. 97 North Paca St. Balto.

A large supply of FORKS, RAKES, HOES, &c., together with every implement wanted by the farmers, kept constantly on hand. Orders for every variety of machinery promptly attended to. HAMBLETON & DIDIER.
jy1 No. 97 N. Paca street, Balto.

HUSSEY'S REAPING MACHINE.

THE subscriber continues to manufacture his REAPING MACHINES, in Baltimore. Farmers are reminded to forward their orders at as early a day as the appearance of their fields will justify, that a proper preparation can be made to supply the increased demand—the question with the farmer now being not whether a machine will cut his crop, but whether he will have a good crop to cut with a machine.

Every improvement will be made this year to render the machines durable and perfect.

Price of Reapers, from 100 to 170 dollars. Extra parts will be furnished at moderate prices, and may be worth to the farmer ten times their cost.

Price of Mowing Machine, including Reaping, $125, and delivered in Baltimore, at any time from February to July.

Baltimore, March 1, 1850. OBED HUSSEY.

Montgomery, August 4, 1849.

This is to certify that I had one of O. Hussey's Reaping machines at work in my field, cutting Timothy Grass a part of two days, and cut in fourteen hours with said machine twenty-eight acres, with one span of horses; it was done in a neater style than it could be done in any other way. The cutters of said machine were not sharpened during the time of cutting said field of grass, and the last acre was cut in as good and neat a style as the first. I have also seen said Reaper cutting wheat, and I consider it the best machine for cutting lodged grain that I have ever seen operate.

ap1 DANIEL S. GRAY.

GUANO.—100 tons Government Peruvian, just inspected. 100 tons Patagonian, a superior article; 30 tons Chilian. Timothy, Clover and Orchard Grass Seed for sale, in lots to suit purchasers. T. W. & L. LEVERING,
ap1 No. 114 Pratt street Wharf.

☞ Every description of AGRICULTURAL IMPLEMENTS constantly on hand, by HAMBLETON & DIDIER, Successors to Maxfield, Mott & Co., 97 Paca st., Balt.

TO ALL WHOM IT MAY CONCERN.

ALL PERSONS who purchased my WIND-MILLS or GRAIN FANS, of Johnson & Monigomery, in 1847; Johnson, in 1848-9; Montgomery & Brother, in 1848-9; H. Stoner & Co., and of Lewis Hartman & Potts, in 1849; of A. Armstrong & Co., in 1848, and of A. Armstrong in 1849-50; and of Stoner & Potts, and Lewis Hartman, now in Maryland, selling Fans; and all others who are using my Combined Patent Fans, are notified to come forward and pay me for the right on all such, on or before the 1st September, 1850, as the above named persons have no right to make, use, or vend my Combined Patent Wind-Mills or Grain Fans. And I would warn the public to be on their guard, of whom they purchase, as I learn that there are those who are going through the country with Fans, and giving assurances to honest and unsuspecting farmers that they will indemnify them against me for trespassing upon my rights in the use of these Mills—but they cannot indemnify you from loss, as the exclusive right to the patent to my fans is vested in me for Pennsylvania and Maryland. My patent is dated March 20th, 1847; as may be proved by reference to the books of the Patent Office at Washington. JOHN BAMBOROUGH, *Patentee.*

N. B.—I would say further, that I now offer a premium of $5,000 to any man, or sett of men, who will prove satisfactorily, that my Combined Patent Grain Fans, or Winnowing Mills, are not the best in the United States. In proof of what I say, hear what the different Agricultural Societies say, in making their awards on Agricultural Implements. In 3 years the ten first premiums were awarded prior to 1848.

First Premium for the best Fan, at Philadelphia, Oct. 6, 1848.
do do do New Castle, Del. Oct. 16, 1848.
do do do Mt. Holly, N. J., certificate, October 11, 1848.
do do do at the great State Fair at Baltimore, Md. diploma, November 10, 1848.
do do do Jeffersonville, Montgomery Co. Pa. Oct. 18, 1848.
do do do from the Franklin Institute, Oct. 27, 1848; they say the first given on fans.
do do do the Silver Medal at Easton, Talbot Co. Md. Nov. 17, 1848

In addition to the above, the following were awarded in 1849.
First Premium, at Newtown, Bucks Co. Pa. Oct. 1849.
do do do Lamb Tavern, Philadelphia, October 4 and 5, 1849, where the committee pronounced my fan the most perfect cleaner.

HERE COME MORE HONORS!!

At the second great State Fair, held near Baltimore, on the 10th, 11th and 12th October, 1849, there being great competition, 33 fans at the Fair, several Patent Fans tried against mine, among them Grant's, Behel's patent, and Sinclair's fan of Baltimore; Abens & Watkins' celebrated fans, of Hagerstown, Md. and several others, and after a full and fair trial, JOHN BAMBROUGH, of Lancaster, Pa. was declared to be entitled to the FIRST PREMIUM, the only premium on fans awarded at this fair.

MORE YET!—The first premium for the best at the first State Fair held at New Castle, Del. Oct. 17, 1849.

STILL MORE.—The first premium at Jeffersonville, Montgomery Co. Pa. after a full trial, Oct. 17, 1849.

MORE YET!—A certificate for the best fan at Mount Holly, Oct. 17, 1849; and at the Prince George's County, Md. Fair, held at Marlboro, 1st November, 1849, after a fair trial, my fan was awarded a silver medal!

☞ I could give 5,700 recommendations, but let the above suffice. A fair trial of my patent Fans, will recommend themselves. Without fear of contradiction, I consider my Fans as far superior to any I have ever seen. I have made a great improvement in them since last year.

Fans for sale, wholesale and retail, of different sizes and prices, from $25 to $34 and $36. If ordered, I will deliver Fans 200 miles, at the shortest notice.

Several agents wanted, to sell rights of the Fan for States and counties. Apply early to the subscriber, at Lancaster City, Penn.

☞ My patent Fans have my name and the date of patent marked on them, and farmers will run no risk or further trouble about it, if they obtain them from Mr. EZRA WHITMAN, corner of Light and Pratt streets, Baltimore, Md. They can be had at Mr. Charles B. Calvert's, Prince George's County, Md.; Dr. S. P. Smith, Cumberland, Md. or of Mr. David Boyd, or Jonathan Tyson, Frederick City, Md.

The editor of the Germantown Telegraph, in speaking of the Exhibition of the Philadelphia County Agricultural Society, held October 5, 1849, says:—"The first that arrested our attention was Bamborough's Grain Fan, which has been improved to such a degree, that it now separates, in the most beautiful manner, the wheat from every other substance. Mr. Bamborough produced wheat mixed with cockle, chess, clover and timothy seed, when the fan separated in the most complete and surprising manner, depositing the cockle and chess in one apartment, the "tailings" in another, and the timothy and clover seed *each in different boxes*—leaving the wheat pure. A greater triumph in an agricultural implement we never saw."

Having had 18 years experience in the business the patentee flatters himself that all will agree with him that his are the best now in use. jy 1 1t JOHN BAMBOROUGH, *Patentee.*

NEW OXFORDSHIRE LONG WOOLED BUCKS FOR SALE.

THE Subscriber has about 40 LONG WOOLED BUCKS, which he will dispose of at any time when called for.—This flock (which has been bred from some of the best ever imported,) is so well known they need no further description than to say, they continue to yield their very heavy fleeces, from 9 to 16 lbs. of washed wool, and when full fatted, will weigh upwards of 300 lbs. alive. This breed of sheep are remarkably healthy and very prolific, and make a very profitable cross with the various breeds of this country, doubling the weight of wool and mutton. The price will be from $50 to $75 for Bucks, and from $25 to $30 for Ewes, according to the quality of the sheep. Gentlemen are invited to call and examine for themselves, or communicate by mail. Direct to Delaware City, Del. jy 1 4t CLAYTON B. REYBOLD.

CHICKERING'S PIANOS.

THE Subscriber is *Sole Agent in Baltimore*, for the sale of CHICKERING'S CELEBRATED IRON FRAMED GRAND AND SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London.—Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, untrusted to the subscriber, either for Pianos, Music, or any article in his line of business, will be faithfully executed. F. D. BENTEEN,
jy 1 6t* 181 Baltimore street.

GUANO.

PERUVIAN, of the latest importations, per Kirkland & Jno. G. Coster. Also, Patagonian, No. 2 and 3, warranted equal to any in this city. Also, Ground Plaster in barrels. For rule by S. FENBY & BRO.
jy 1 Corner Gay and Pratt street.

Pennock's Patent Seed & Grain Drill,

FOR Planting Wheat, Rye, Barley, Indian Corn, Oats, Peas, &c. (For description of this machine, see Pictorial American Farmer.)

Extract from a letter by Capt. Hill Carter, of "Shirly," near City Point, Va:—"Your Drill Machine is the most complete labor saving machine I ever saw, it does the work of four harrows, twelve mules and five men, (one a good seedsman,) with only three mules and two men; and I am determined to have a machine for my own use next season.

Respectfully, yours, HILL CARTER."

PREMIUMS.—Philadelphia and Delaware County Agricultural Society, first premium, 1841; St. George's and Appoquinimink Agricu tural Society, 1841; American Institute, Silver Medal, 1842; Franklin Institute, Diploma, Honorary, 1842; New Castle County, (Del.) Agricultural Society, first premium, 1845; New York State Agricultural Society, Diploma, Honorary, 1846; New York State Agricultural Society, first premium, 1847. S. & M. PENNOCK,
jy 1 Kennet Square, Chester County, Pa.

SEVEN VIRGINIA FARMS FOR SALE.

I offer for sale the following Farms in Culpepper, Va., near the Alexandria Rail-road, and within a few miles of the Rappahannock river improvement. One contains 737 acres, another 450, another 400, another 287, another 266, and another 168 acres. They are well watered and timbered, with good buildings, except the last, of excellent soil, easily tilled and improved, and now for grain and grazing equal to any in the county. The products of these farms in a short time can be sent to either of the three best markets in the State, at a trifling cost. They range in price from $12 to $25 per acre, on a long credit by securing the money and paying interest. Also, another in King George Co., near the Potomac, containing about 200 acres, price for this, $500 cash, or on a credit by paying interest. Persons wishing to purchase are invited to view them. JOHN C. HANSBROUGH.
Stevensburg, Culpeper Va. je 1 2t

CHAPPELL'S FERTILIZER.

REMOVAL.—Early in July, the undersigned will remove his office from the corner of Hanover and Lombard sts., to one of the *Stores* over the *Howard Buildings* in Lombard st. a few doors below my present office. *Of this Removal*, my friends will please take notice. jy 1 P. S. CHAPPELL.

P. S. CHAPPELL, Manufacturing Chemist, *Baltimore*, offers for sale the following articles, all of which may be used to advantage by Agriculturists, viz.—

500 *Carboys Oil Vitriol*, or Sulphuric Acid, for dissolving bones.

100 *Casks Potash*, residium from Prusiate Potash. It contains besides *Potash*, *Phosphoric Acid*, and other soluble salts.

50 *tons Soda Cake*, (*ground*) residium from the manufacture of Nitric Acid from Nitrate Soda, and Muriatic Acid from Muriate Soda. 1 lb. of this salt contains as much Sulphuric Acid and Soda, as 2 1-8 lbs. Glauber's Salts, or the Sulphate of Soda of the shops.

200 *tons Black*, residium from the manufacture of Prusiate Potash. This article is usually known as "*Animal Charcoal*," and is of great service as an improver of the soil. Besides Chared Animal matter, it contains some valuable soluble salts—put up in barrels.

Also—2500 *barrels Chappell's Fertilizer*, or *Agricultural Salts*.

☞ I shall be prepared this fall, to present such evidences of the Fertilizing properties of this compound, as will *fully satisfy every doubting mind*, that this preparation is the *cheapest and best manure* that can be used on *wheat*, or any other crop. jy1

GUANO!—GUANO!!

NOTICE TO FARMERS AND PLANTERS.

THE undersigned have on hand a large supply of PERUVIAN and PATAGONIAN GUANO: which they offer for sale in quantities to suit, and at *low prices*.

The "Peruvian," or *No.* 1 *Guano*, is all of *direct importation*, *this year*,—and its quality is not surpassed by any in the Country!!!

Our "Patagonian," or *No.* 2 *Guano*, is *superior* to any other importation in the market,—and for clayey lands, white oak or other soils, requiring the aid of Phosphates, is equal in value to some specimens of the Peruvian.—*See Dr. Higgins, State Chemist's Report, pages* 43, 72 and 73.

The following Certificate, furnished by an eminent Chemist of Baltimore, of our Patagonian Guano, shows at once its valuable properties.

To P. Malcom & Co., Baltimore:—I consider the specimen of Patagonian Guano, submitted by you for examination, to be one of the best I have ever seen, and compares very well with some specimens of Peruvian. D. STUART, M. D.
77 Eutaw Street, Baltimore.

☞ This description can be obtained for nearly one-third less than the price of Peruvian!!!

☞ Our Guano is put up in barrels, and in strong substantial bags, weighing from 150 to 200 lbs. and we warrant it to be pure and unadulterated; each bag having been weighed and inspected by the "State Inspector," whose stamp is upon every bag. A liberal deduction made to clubs or parties purchasing large quantities. Farmers will do well to call upon us fore purchasing.

☞ We have also constantly on hand, Bone Dust and ground Plaster, in barrels. P. MALCOM & CO.
Grain and Flour Warehouse, No. 1 Wood Street,
jy 1 4t Bowly's Wharf, South of Pratt Street.

GUANO.

PERUVIAN and Patagonia Guano, late importation and superior quality. For sale in lots to suit purchasers, by WM. ROBINSON, No. 4 Hollingsworth Street,
1t Near Pratt Street Wharf.

HORSE RAKES.—Just received a Fresh supply of Johnson's superior Revolving Horse Rake.
Hambleton & Didier, 97 N. Pare st., Balt.

LOUDOUN CO. Va. LANDS FOR SALE.

A GENTLEMAN of Virginia, has a tract of 2,100 acres of Land, of which he will sell 1,300 acres, and intends improving the balance. It is situated in Loudoun County, Va., 10 miles from Leesburg, on the turnpike, from that place to Washington, 21 from the latter, and 23 from Alexandria; this land is naturally adapted to grain and grass, and the facilities for lime, &c. are very favorable. A great bargain may be had; $5 50 to $7 75 per acre will be taken for it. For particulars apply to S. SANDS, Office of the American Farmer, where a plate of the land can be seen, and terms and other particulars made known. jy 1 1t

GUANO!—GUANO!!

THE Subscribers have on hand full supplies of
Peruvian Guano,
Patagonian Guano, 1st and 2d quality,
Ground Bone, very superior,
Clover Seed,
Buckwheat Seed,
Timothy Seed,
Ground Plaster,
Kettlewell's Renovator, at manufacturers prices,
Reynolds' Superior Corn Sheller,
Salt, Fish, Tar, Molasses, Bacon, which they will sell at the lowest market prices, and give every attention to their proper shipment. Address, W. WHITELOCK & CO.
jy 1 3t Cor. Gay and High Streets, Baltimore.

AN IMPROVEMENT in PLOUGHING.

THE Subscriber has invented, and obtained Letters Patent therefor from the United States, an IMPROVEMENT on the PLOUGH, by which much labor and inconvenience is saved. It is a machine to dislodge the rubbish which frequently clogs the cutter of the plow, and causes frequent stoppages to enable the ploughman to divest it thereof. A lever is attached to the handle of the plough, and a slight jork by the plowman will accomplish the object. It is very simple and of little cost. Rights for the use thereof for sale—apply, post paid, to SAMUEL D. GITT,
1t* Butler Township, Adams Co. Penn.

FOR HARVEST.

HAVING recently received a large and complete assortment of IMPLEMENTS FOR HARVEST, I am prepared to supply orders for—

Grant's Patent Premium Grain Cradles; the best in use.
Wilcox's Patent Revolving Hay Rakes.
Genuine English Waldron Grass and Grain Scythes.
American Grass and Grain Scythes.
Yankee Snathes, patent and plain, and
Hand Rakes, of superior quality.

I HAVE ALSO IN STORE:

Grant's Patent Fanning Mills, warranted to clean 60 bushels of wheat per hour.
Bogardus's, Eddy & Co's, Sinclair's, and other Horse Powers and Thrashing Machines.
Pierson's Patent Seed Drilling Machine.
Together with every variety of Agricultural Implements required for farming purposes. All of which are offered upon reasonable terms. FITZHUGH COYLE,
National Agricultural Warehouse,
jy 1 1t Seventh Street, Washington City, D. C.

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